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FIG. 1A

Cell-Specific Adenovirus

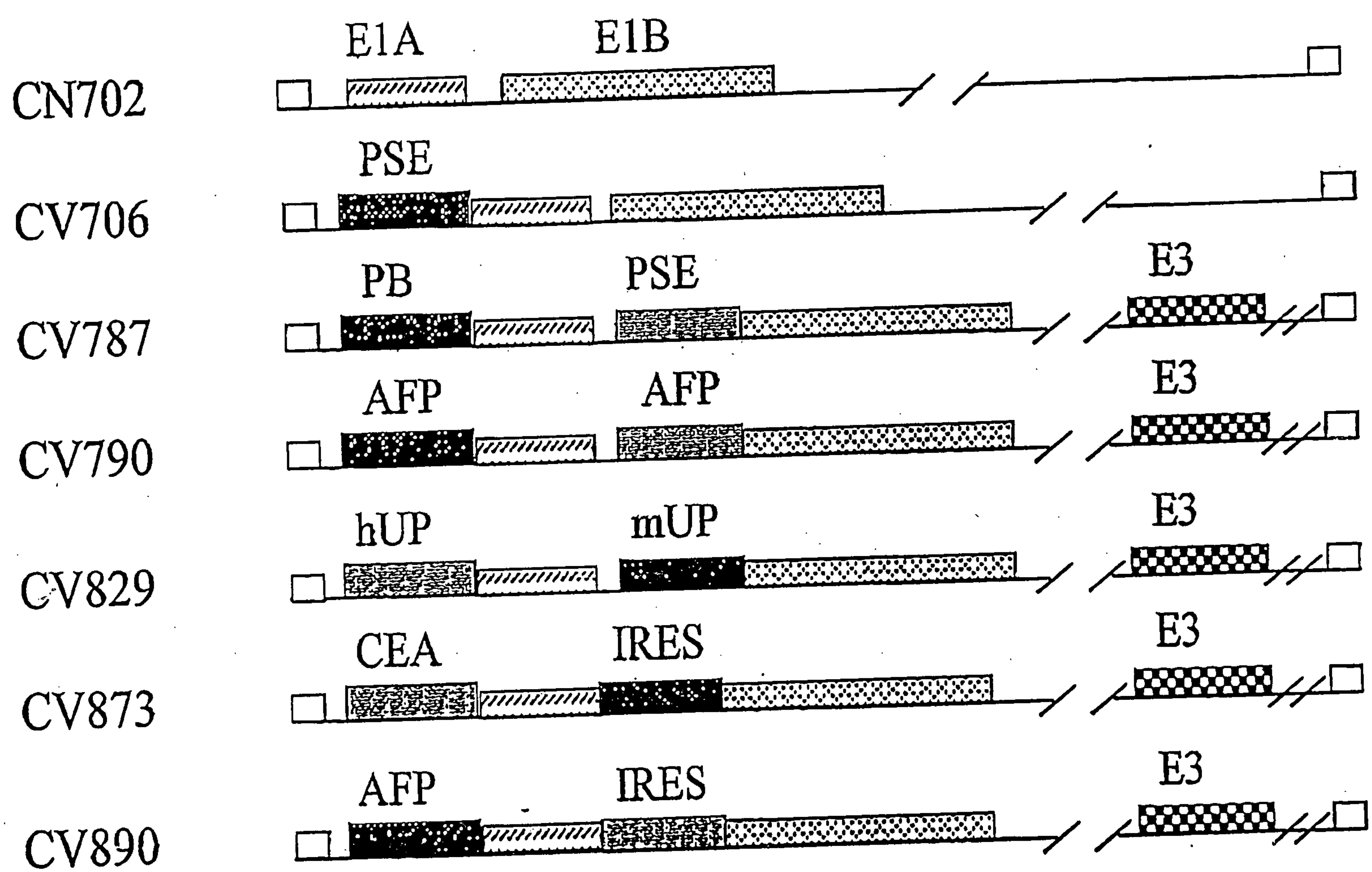

FIG. 1B

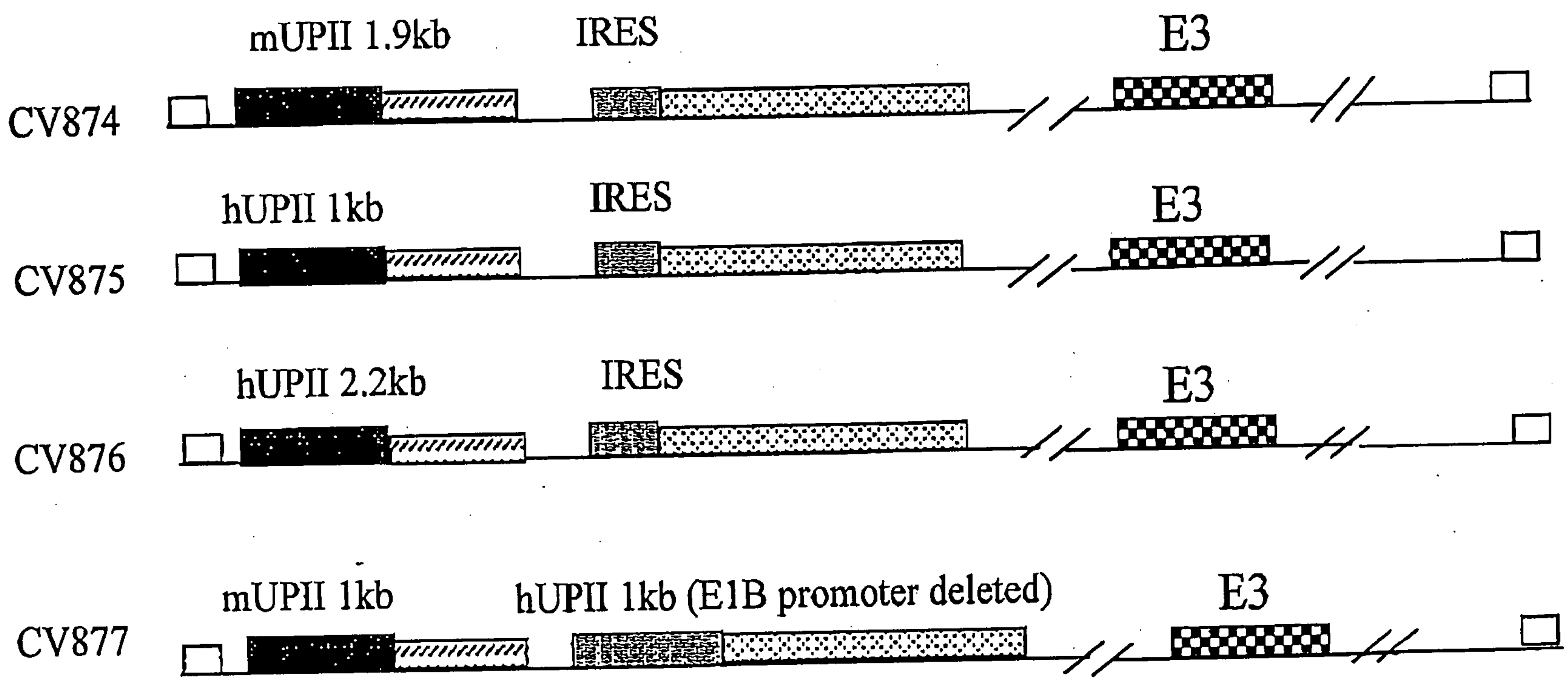
CV874
mUPII 1.9kb
IRES
E3
CV875
hUPII 1kb
IRES
E3
CV876
hUPII 2.2kb
IRES
E3
CV877
mUPII 1kb
hUPII 1kb (E1B promoter deleted)
E3

FIG. 2

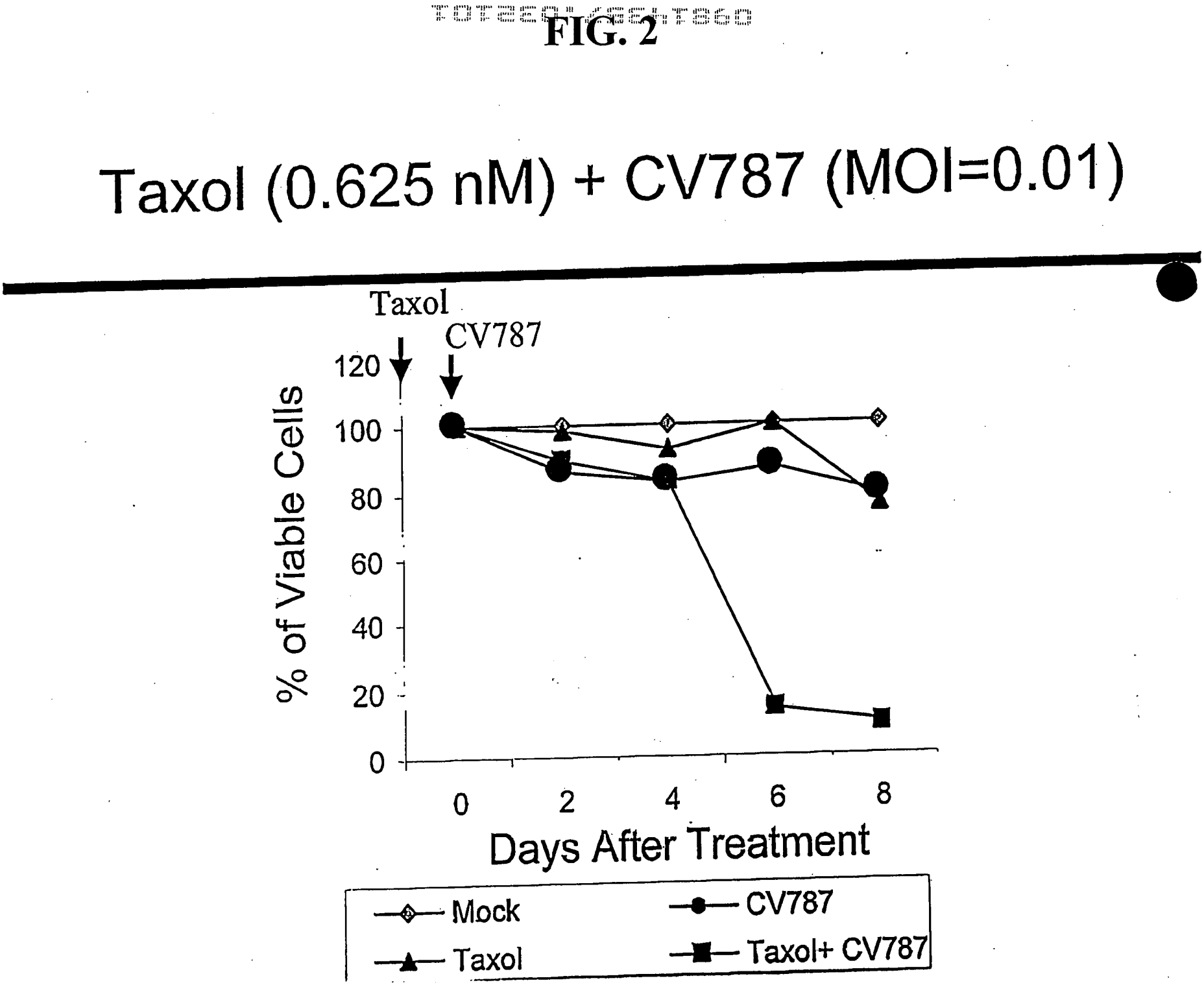
Taxol (0.625 nM) + CV787 (MOI=0.01)
Taxol
CV787
120
100
80
60
40
20
0
% of Viable Cells
0
2
4
6
8
Days After Treatment
Mock
CV787
Taxol
Taxol+ CV787

FIG. 3

Taxotere(3.12 nM) + CV787(moi=0.01)

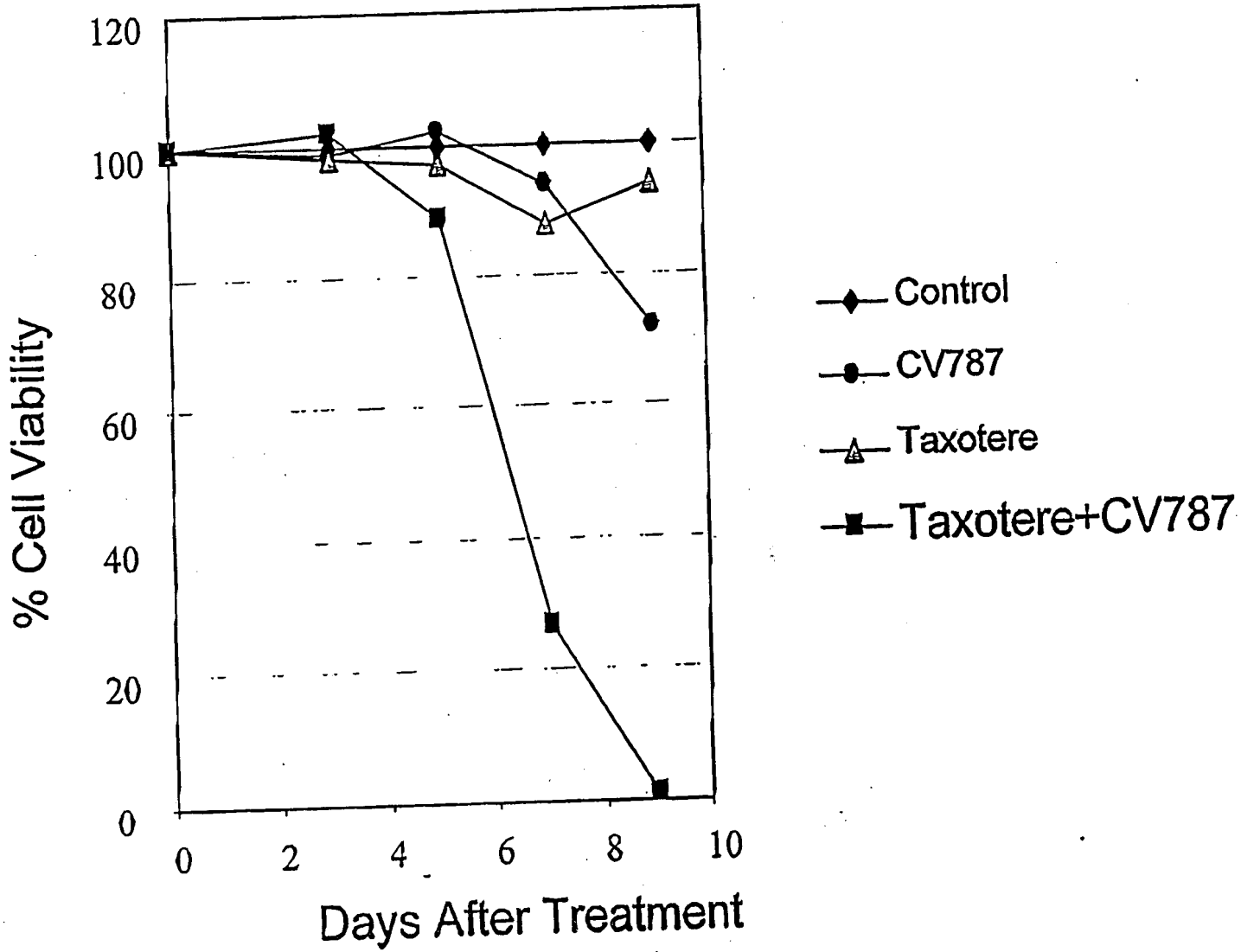

FIG. 4

CV787(moi=0.01) + Taxotere(3.12 nM)

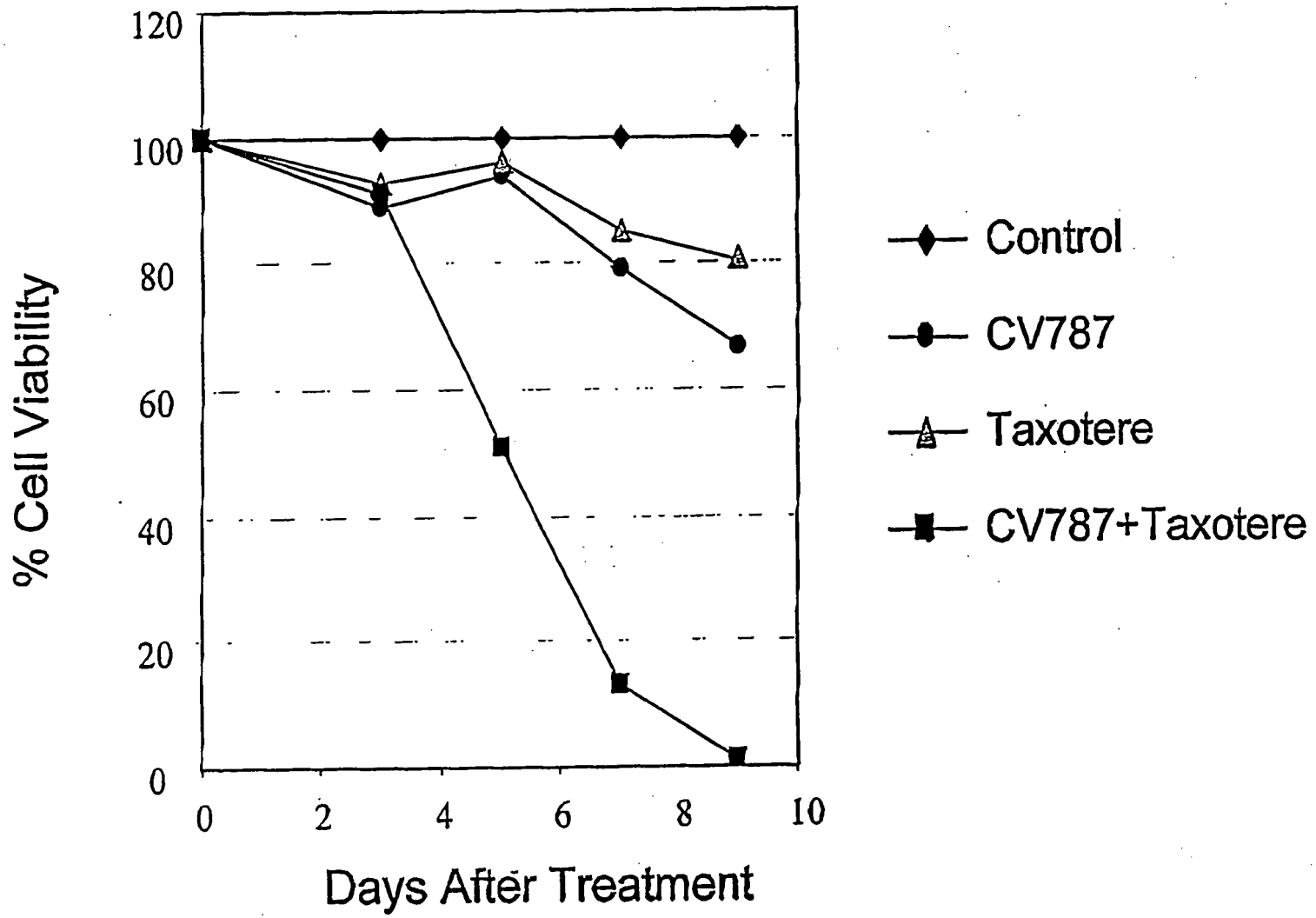

FIG. 5

Mitoxantrone (100 nM) + CV787 (moi=0.1)

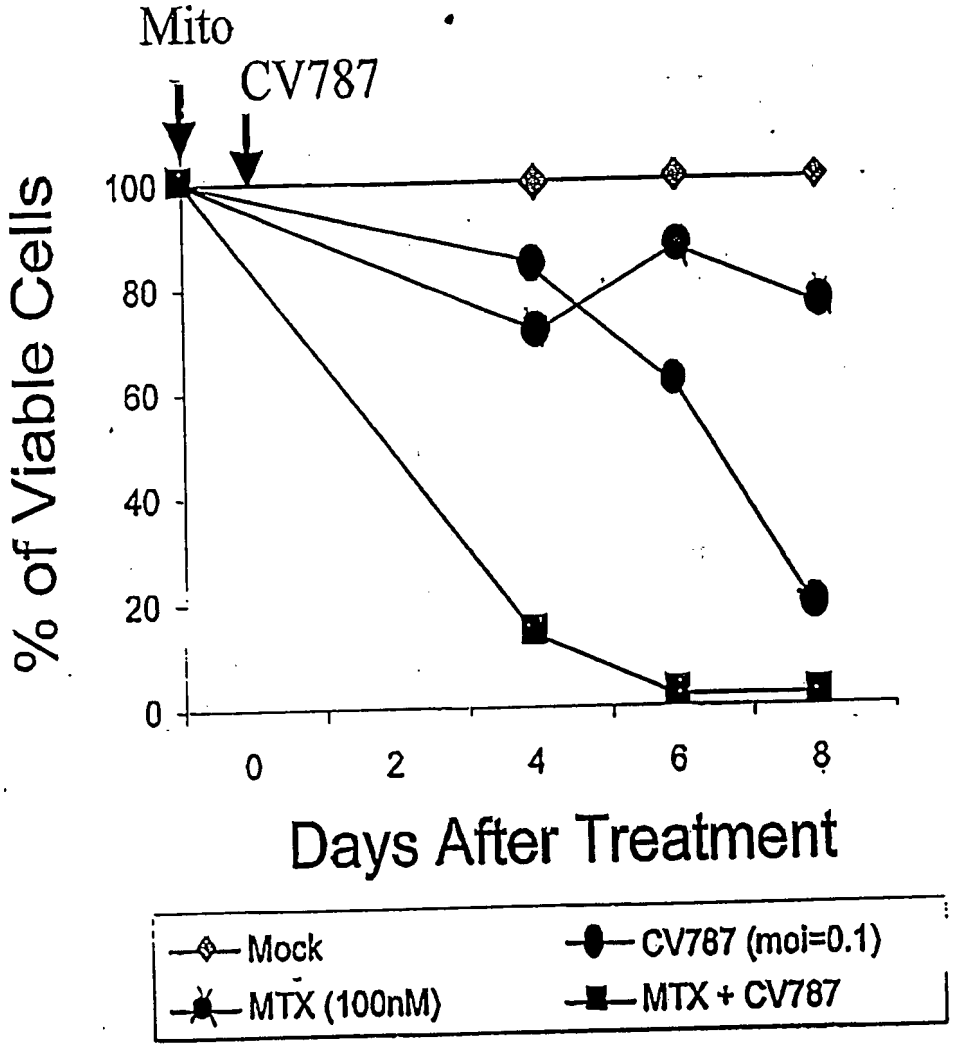

FIG. 6

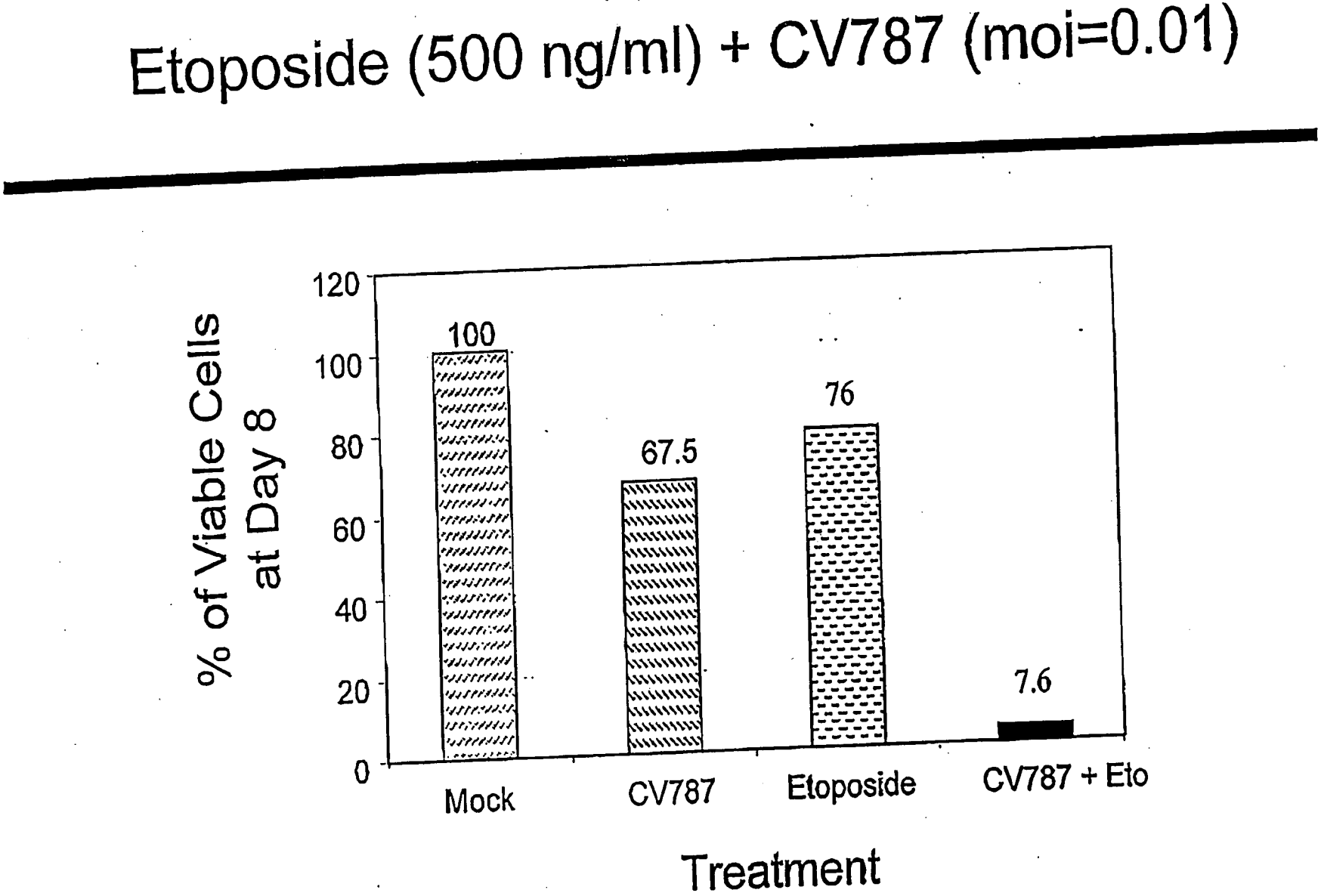
Etoposide (500 ng/ml) + CV787 (moi=0.01)
% of Viable Cells at Day 8
120
100
80
60
40
20
0
100
67.5
76
7.6
Mock
CV787
Etoposide
CV787 + Eto
Treatment

FIG. 7

CV787 (moi=0.01) + Doxorubicin (50 ng/ml)

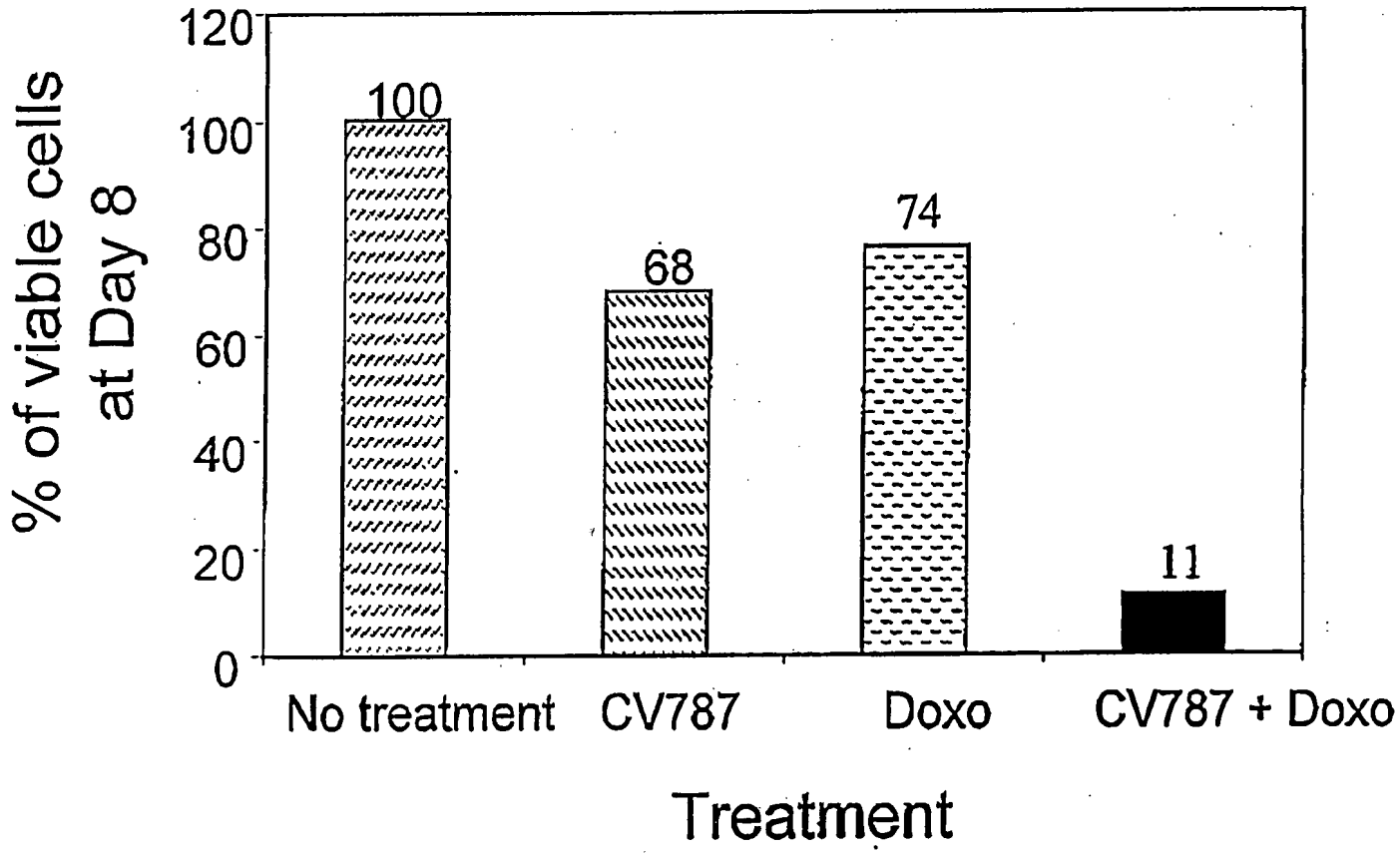

FIG. 8

Cisplatin (8.25 μM) + CV787 (moi=0.1)

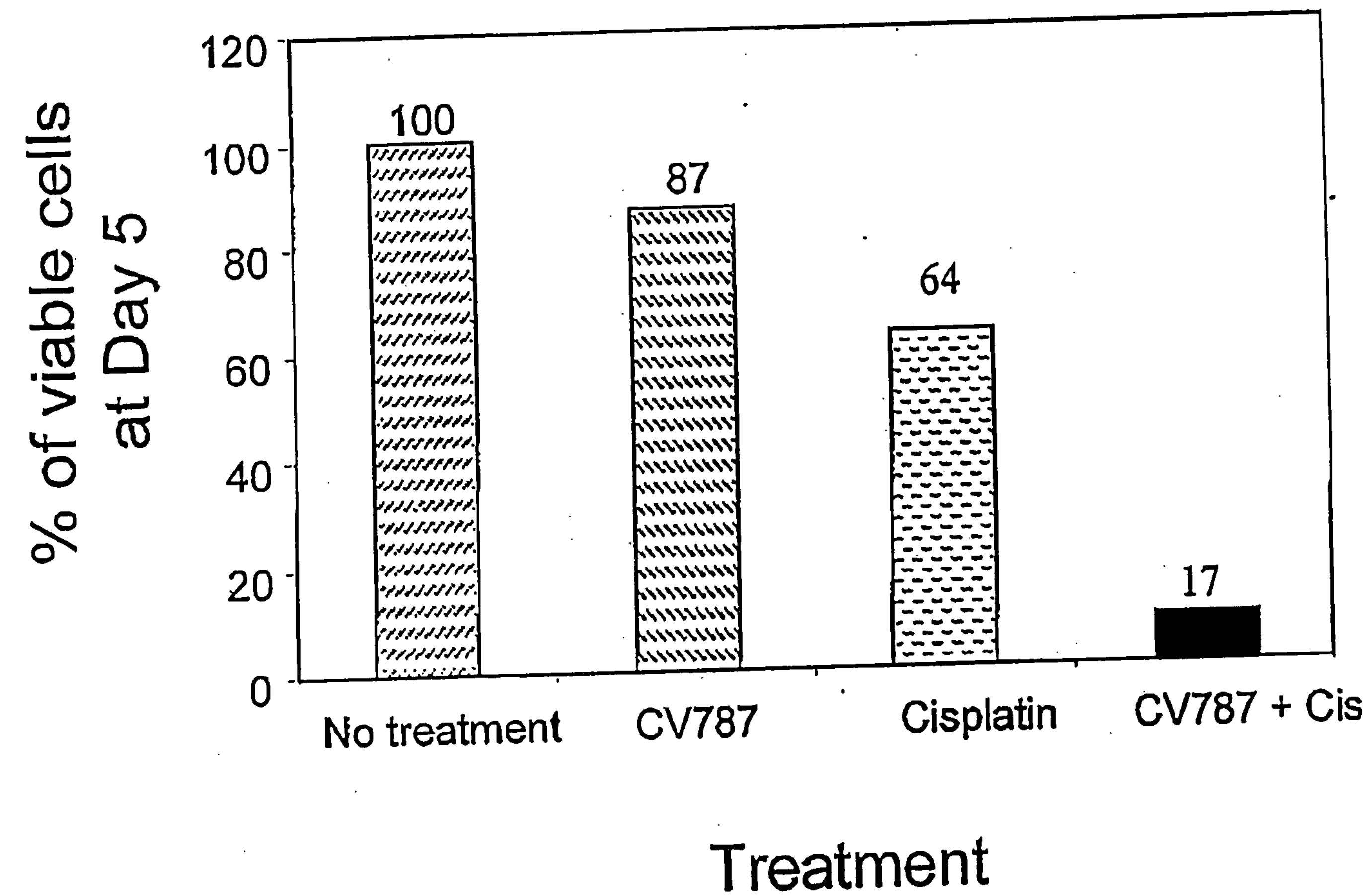

FIG. 9

5-Fluorouracil (35 μM) + CV787 (moi=0.01)

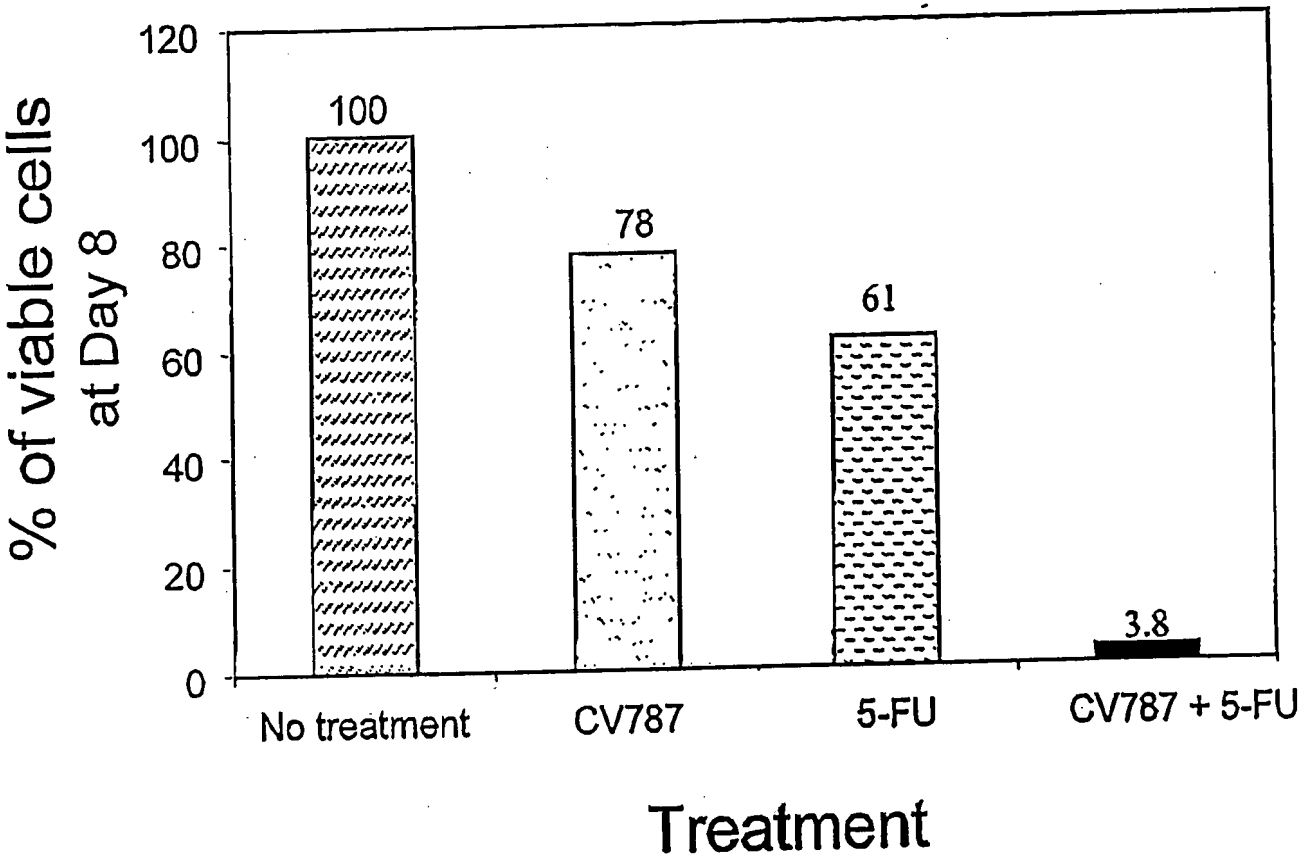

FIG. 10

CV787 (moi=0.01) + ^{137}Cs (2 Gy)

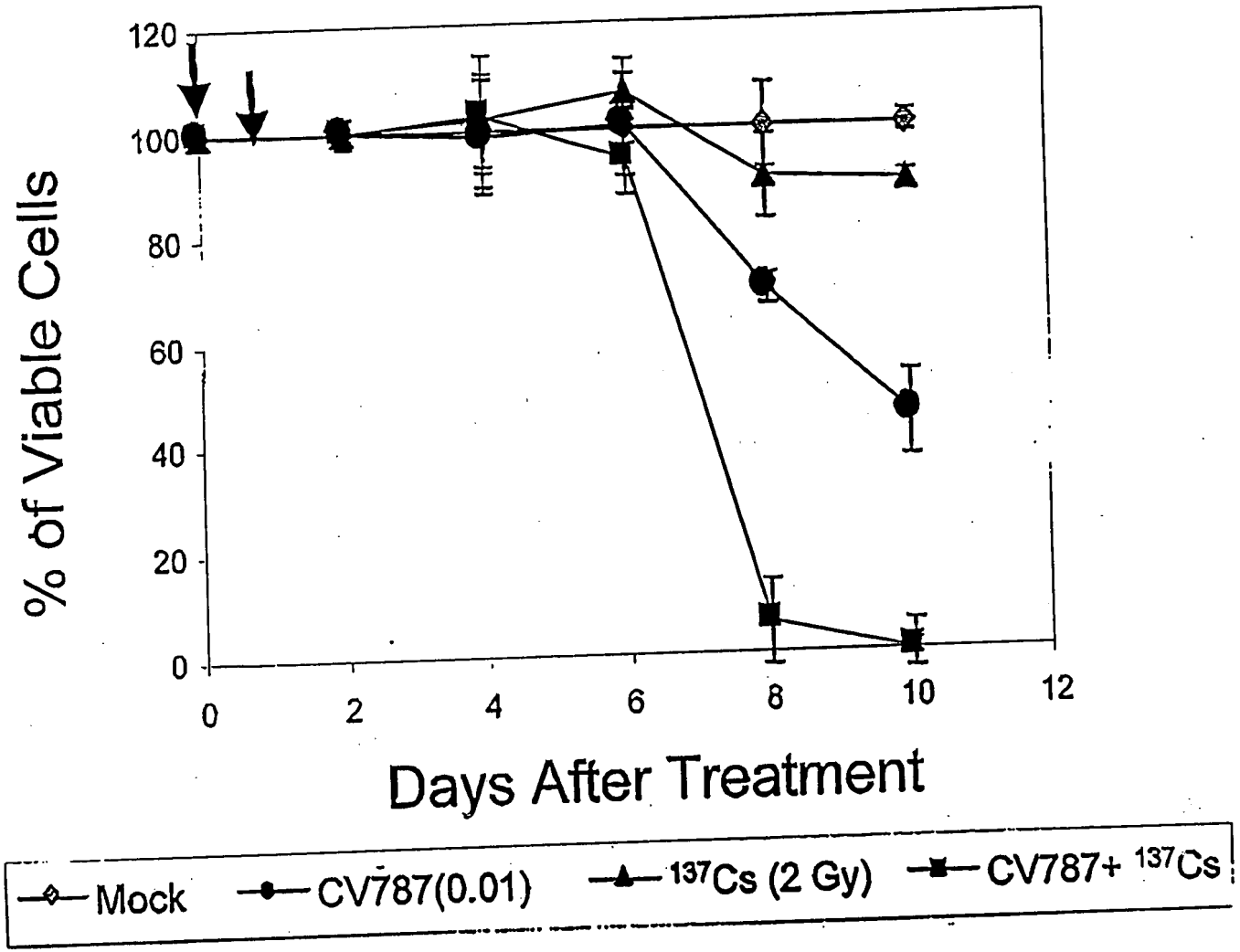

FIG. 11

Virus Yield (LNCaP)

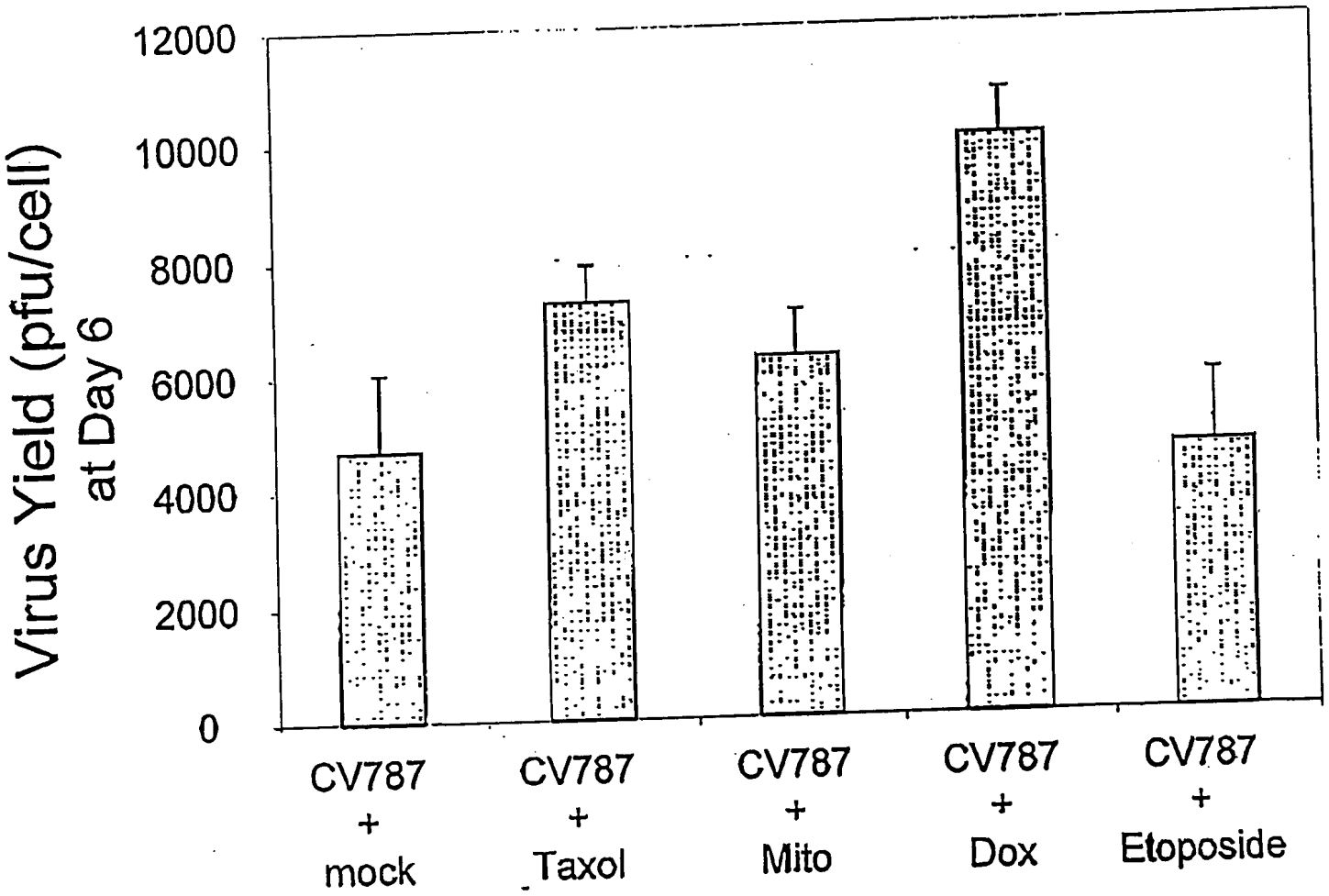

FIG. 12

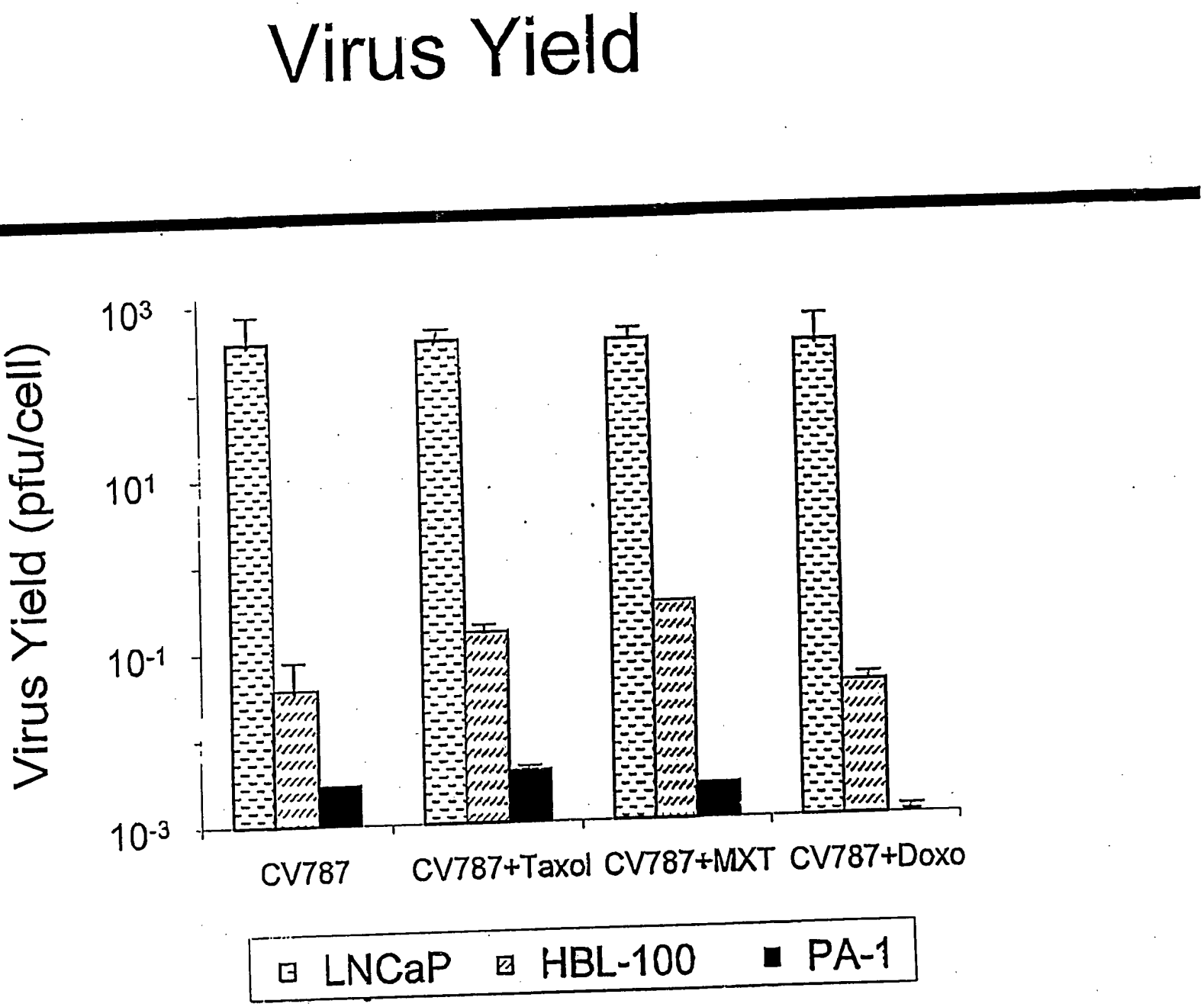
Virus Yield
Virus Yield (pfu/cell)
10³
10¹
10⁻¹
10⁻³
CV787
CV787+Taxol
CV787+MXT
CV787+Doxo
LNCaP
HBL-100
PA-1

FIG. 13

Taxol Does not Alter CV787's Specificity

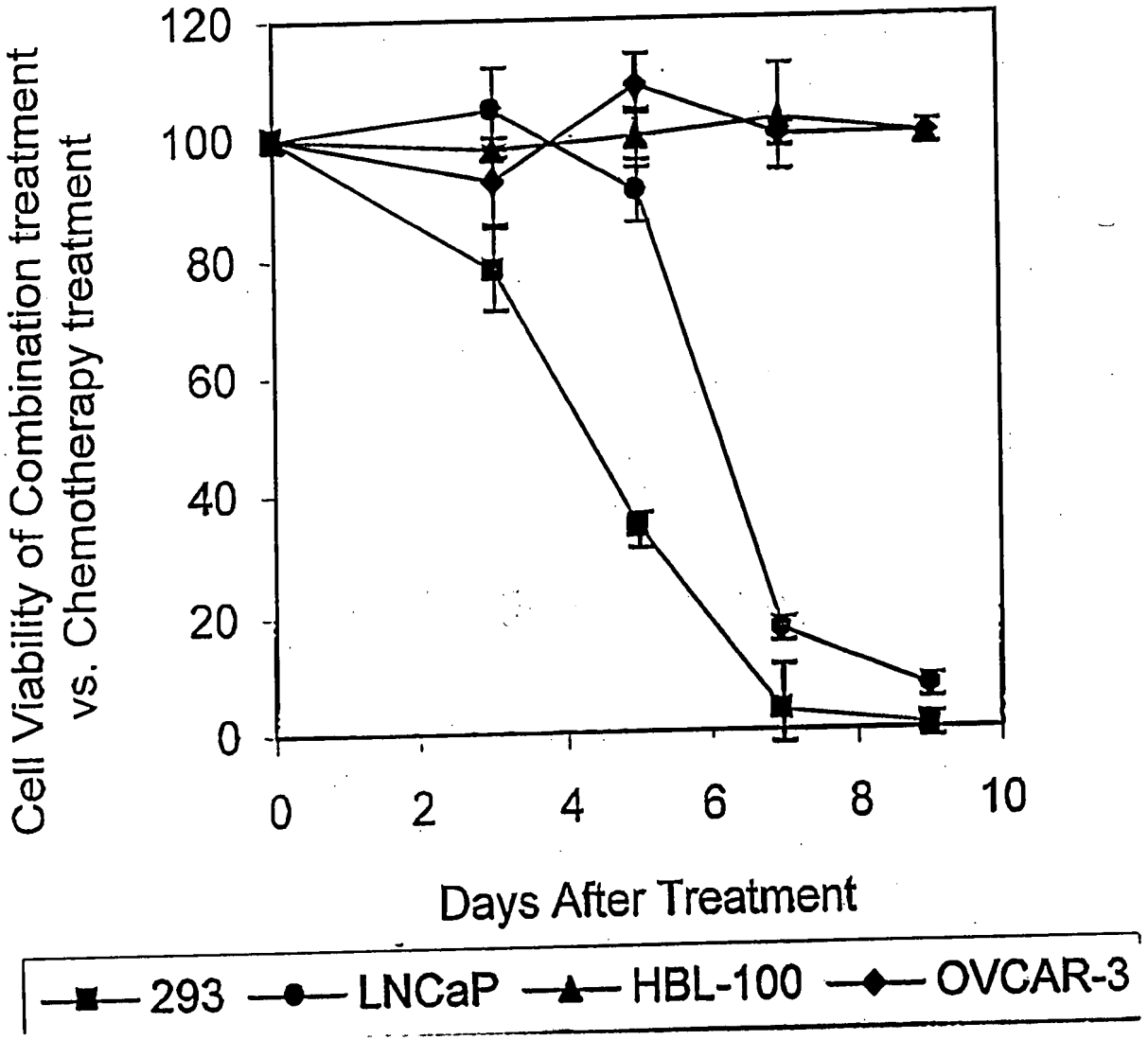

FIG. 14

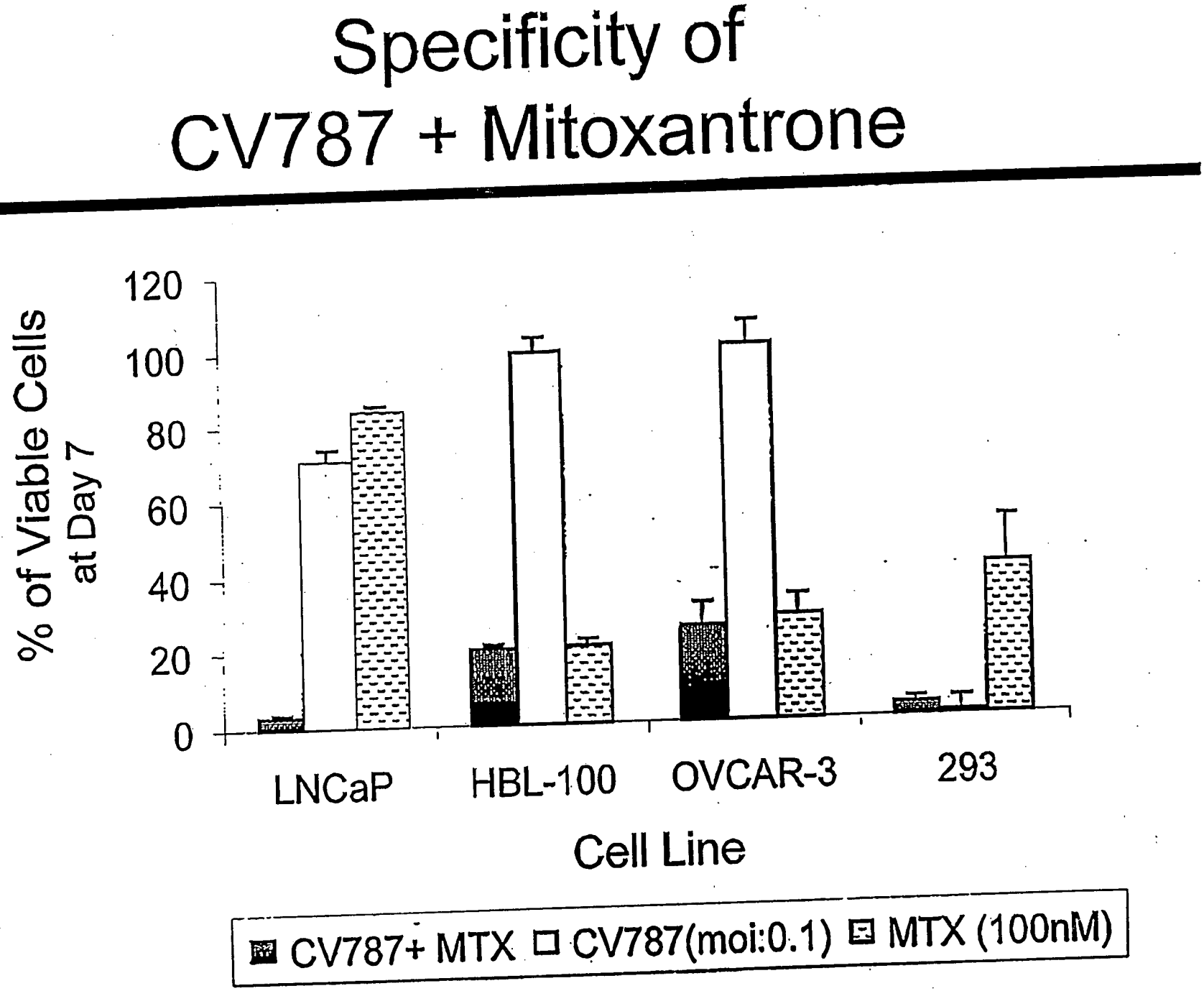
Specificity of
CV787 + Mitoxantrone
% of Viable Cells
at Day 7
120
100
80
60
40
20
0
LNCaP
HBL-100
OVCAR-3
293
Cell Line
CV787+ MTX
CV787(moi:0.1)
MTX (100nM)

FIG. 15

CV790 0.01moi/Doxorubicin 10ng/ml

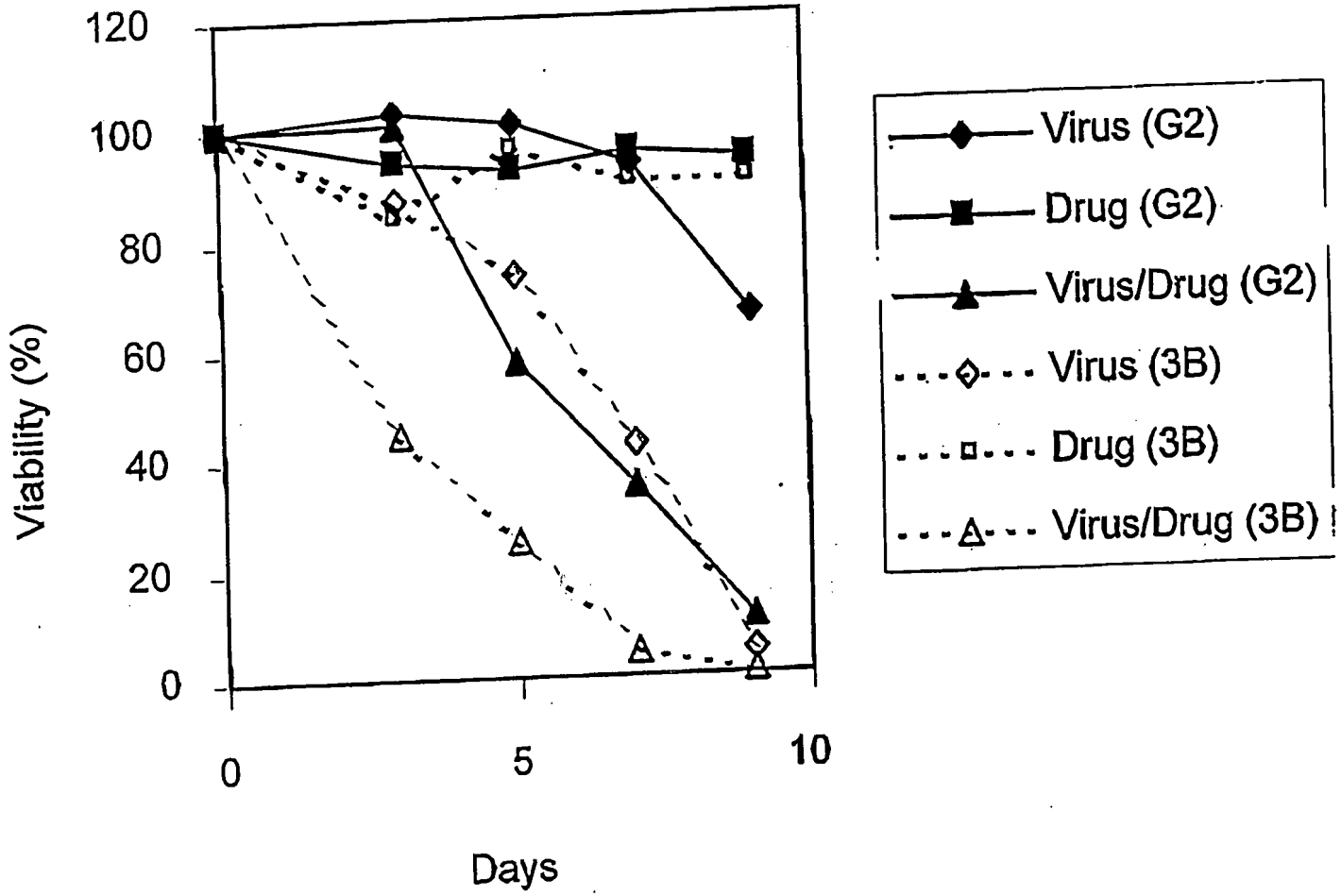

FIG. 16

10ng/ml Doxorubicin first, then 0.01 MOI CV790

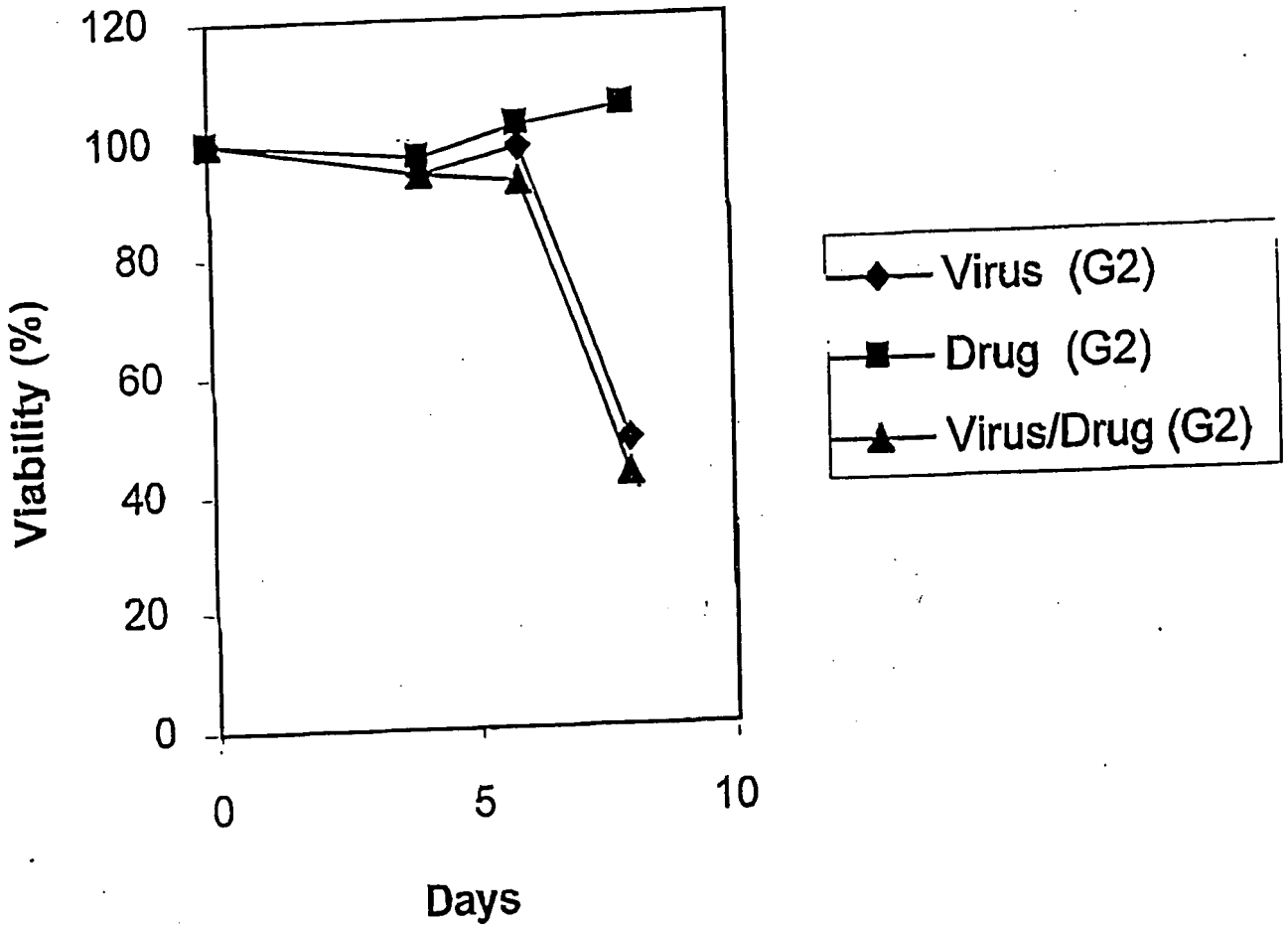

FIG. 17

0.01 MOI CV790 and 10ng/ml Doxorubicin together

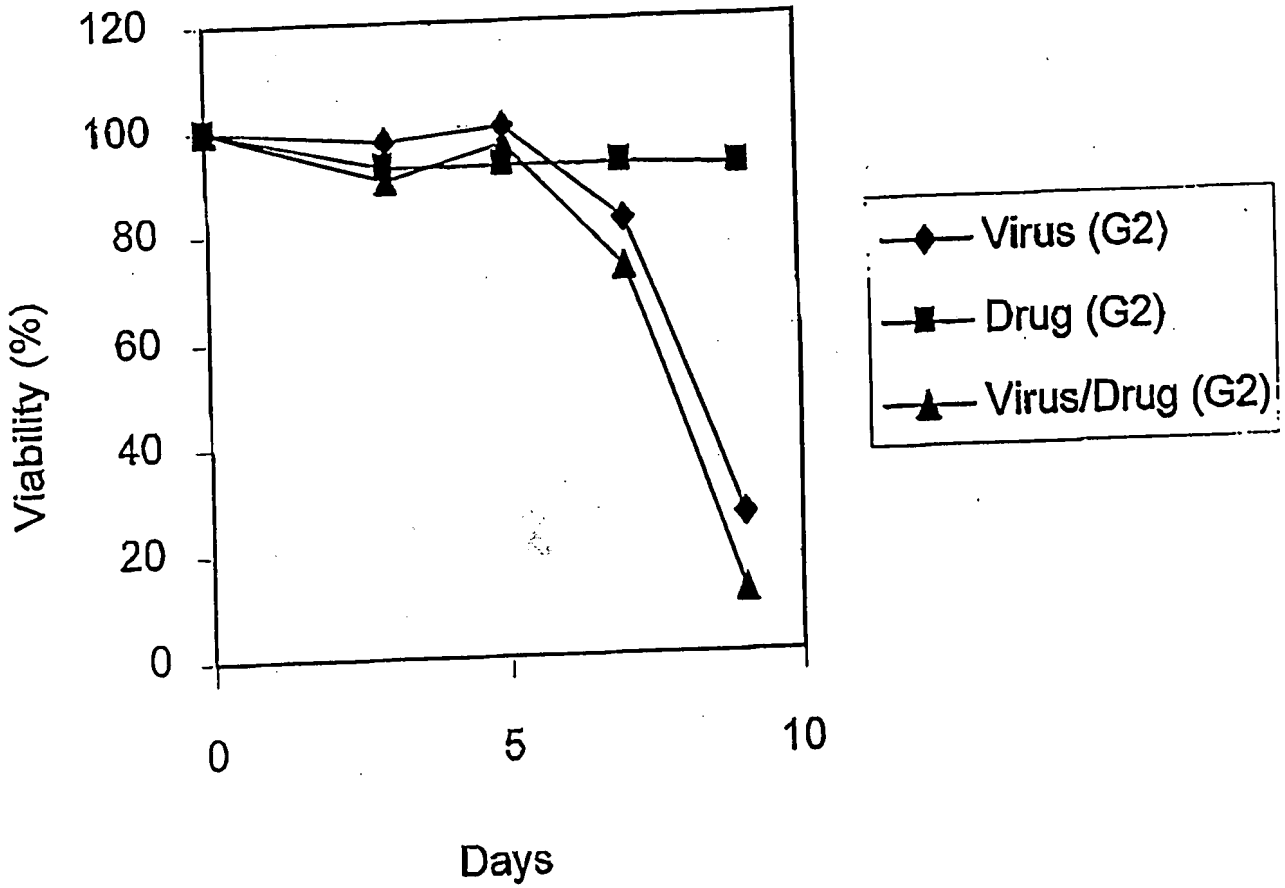

FIG. 18

CV790 0.1moi/Cisplatin 1ug/ml

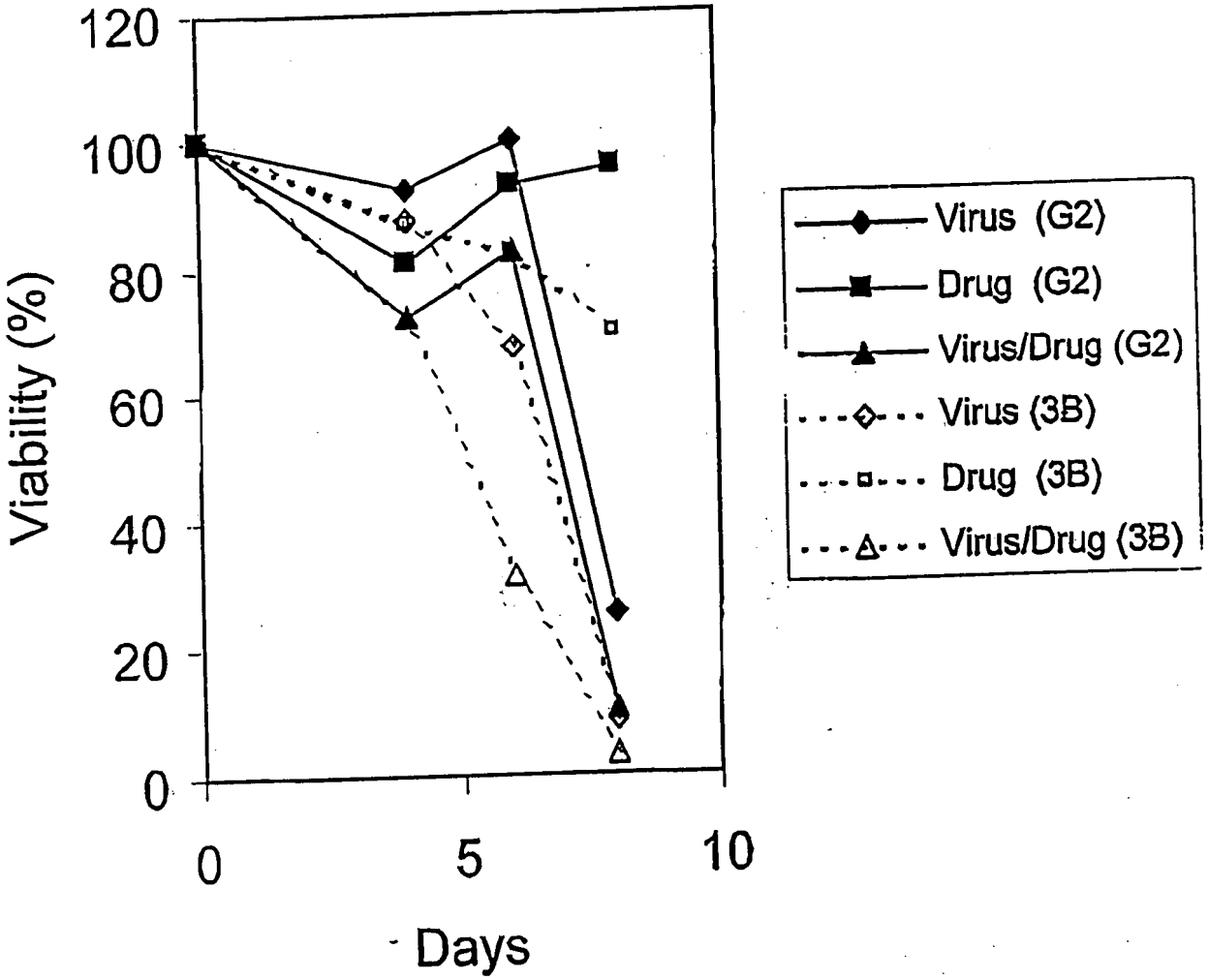

FIG. 19

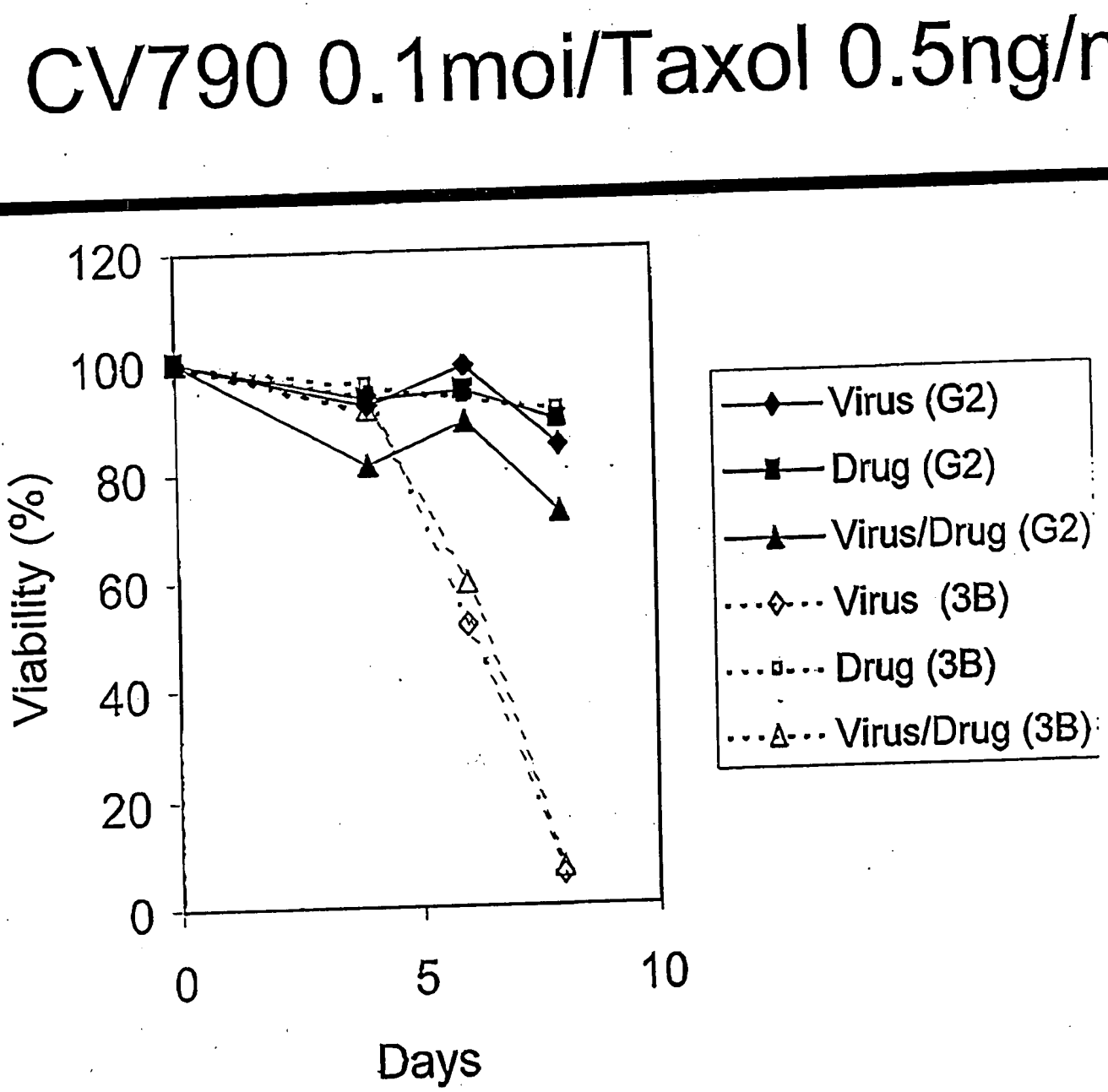
CV790 0.1moi/Taxol 0.5ng/ml
120
100
80
60
40
20
0
Viability (%)
0
5
10
Days
Virus (G2)
Drug (G2)
Virus/Drug (G2)
Virus (3B)
Drug (3B)
Virus/Drug (3B)

FIG. 20

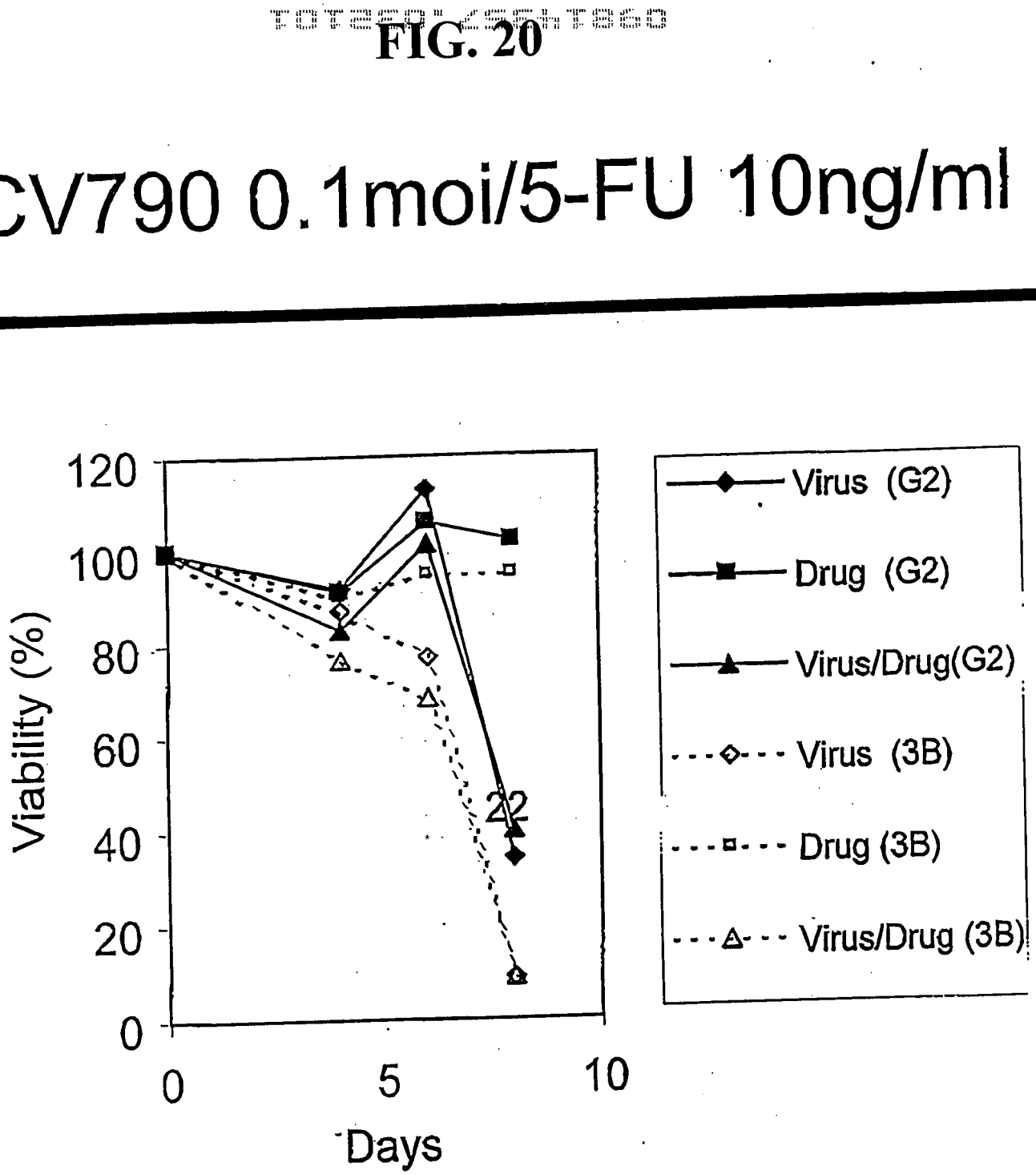
CV790 0.1moi/5-FU 10ng/ml
Viability (%)
120
100
80
60
40
20
0
0
5
10
Days
Virus (G2)
Drug (G2)
Virus/Drug(G2)
Virus (3B)
Drug (3B)
Virus/Drug (3B)

FIG. 21

CV790 0.1moi/Mitoxantrone 4ng/ml

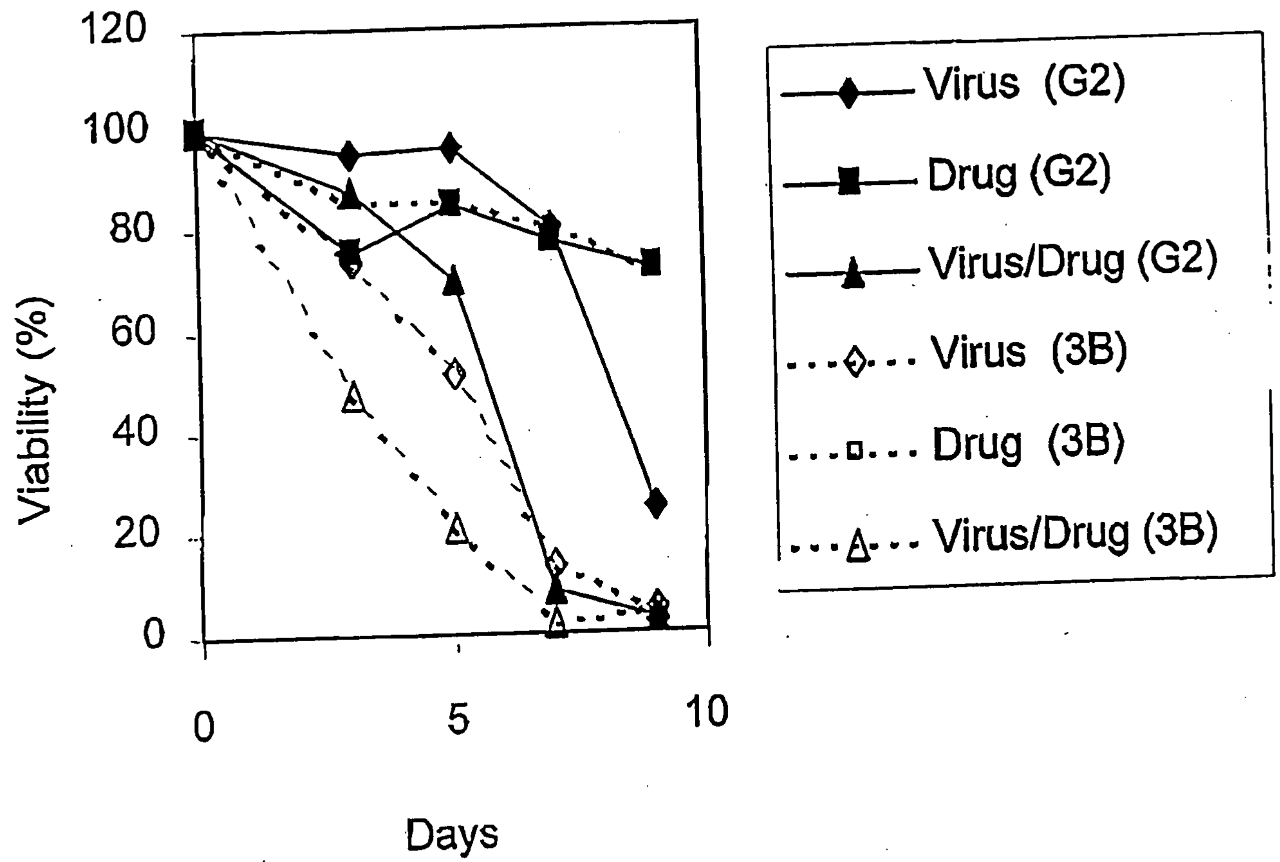

FIG. 22

CV790 0.1moi/Mitomycin C 10ng/ml

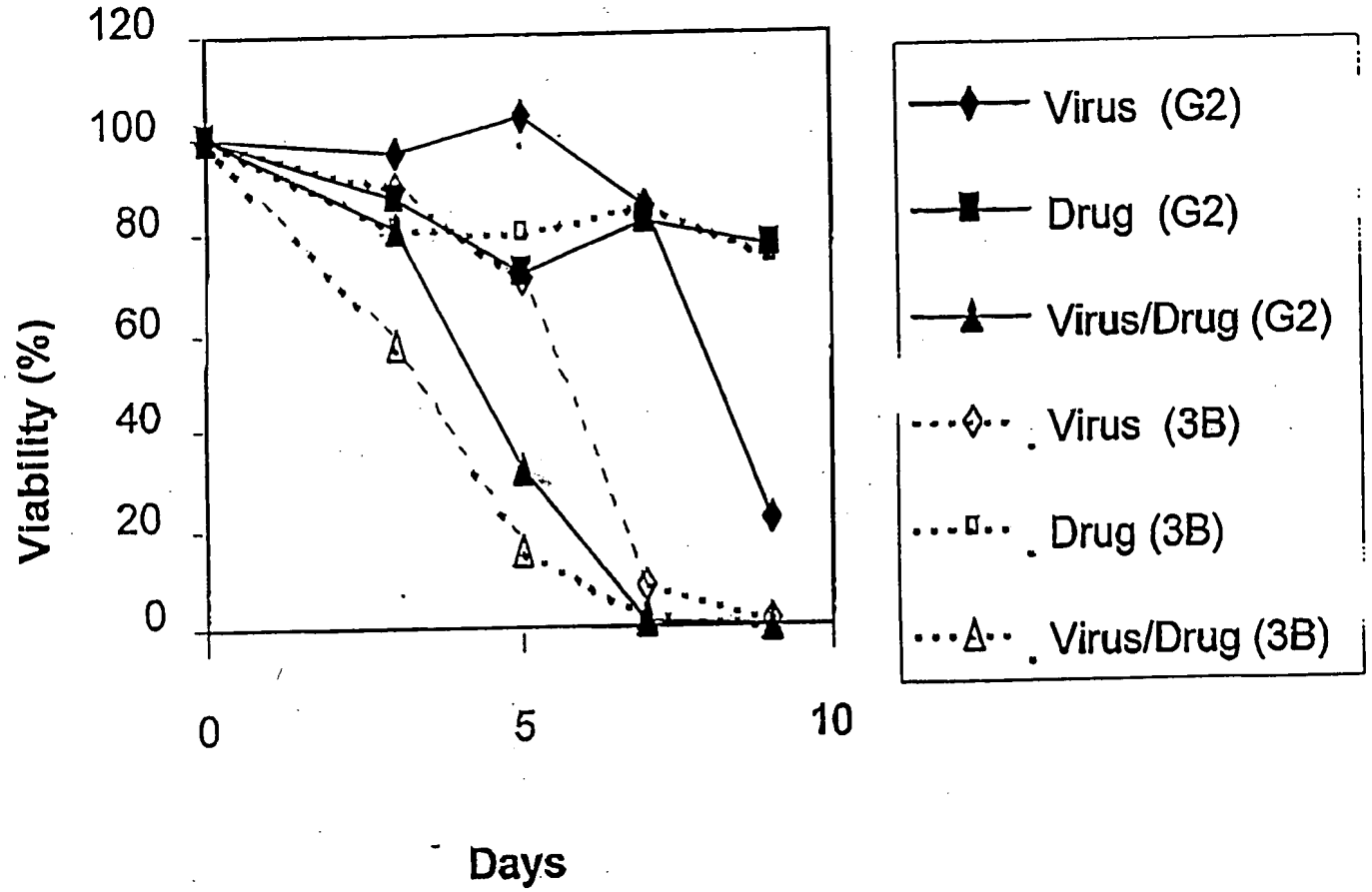

FIG. 23

Tumor Volume of LNCaP Xenograft Treated with CV787 and Taxol

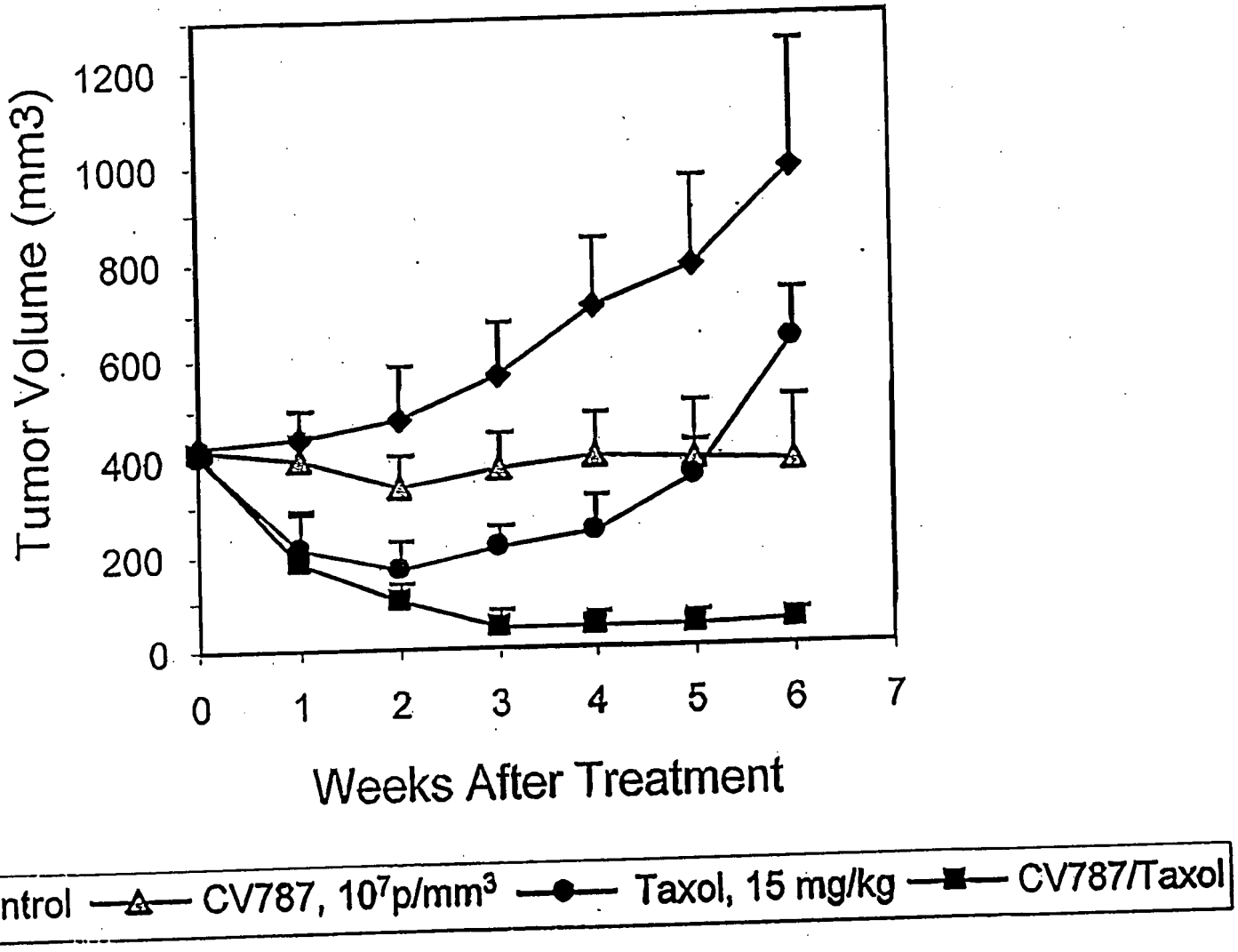

FIG. 24

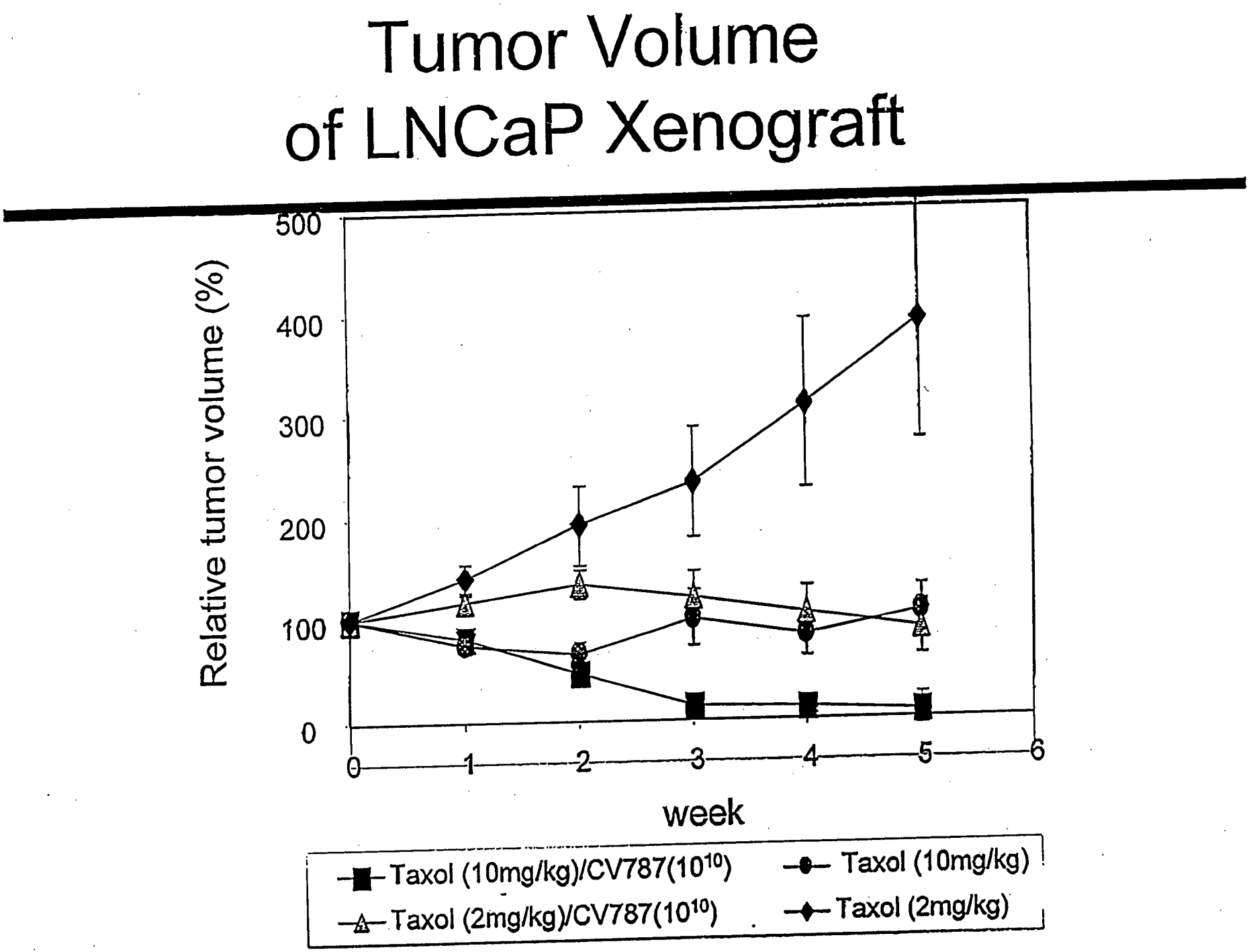
Tumor Volume
of LNCaP Xenograft
Relative tumor volume (%)
500
400
300
200
100
0
0
1
2
3
4
5
6
week
Taxol (10mg/kg)/CV787(10^10)
Taxol (10mg/kg)
Taxol (2mg/kg)/CV787(10^10)
Taxol (2mg/kg)

FIG. 25

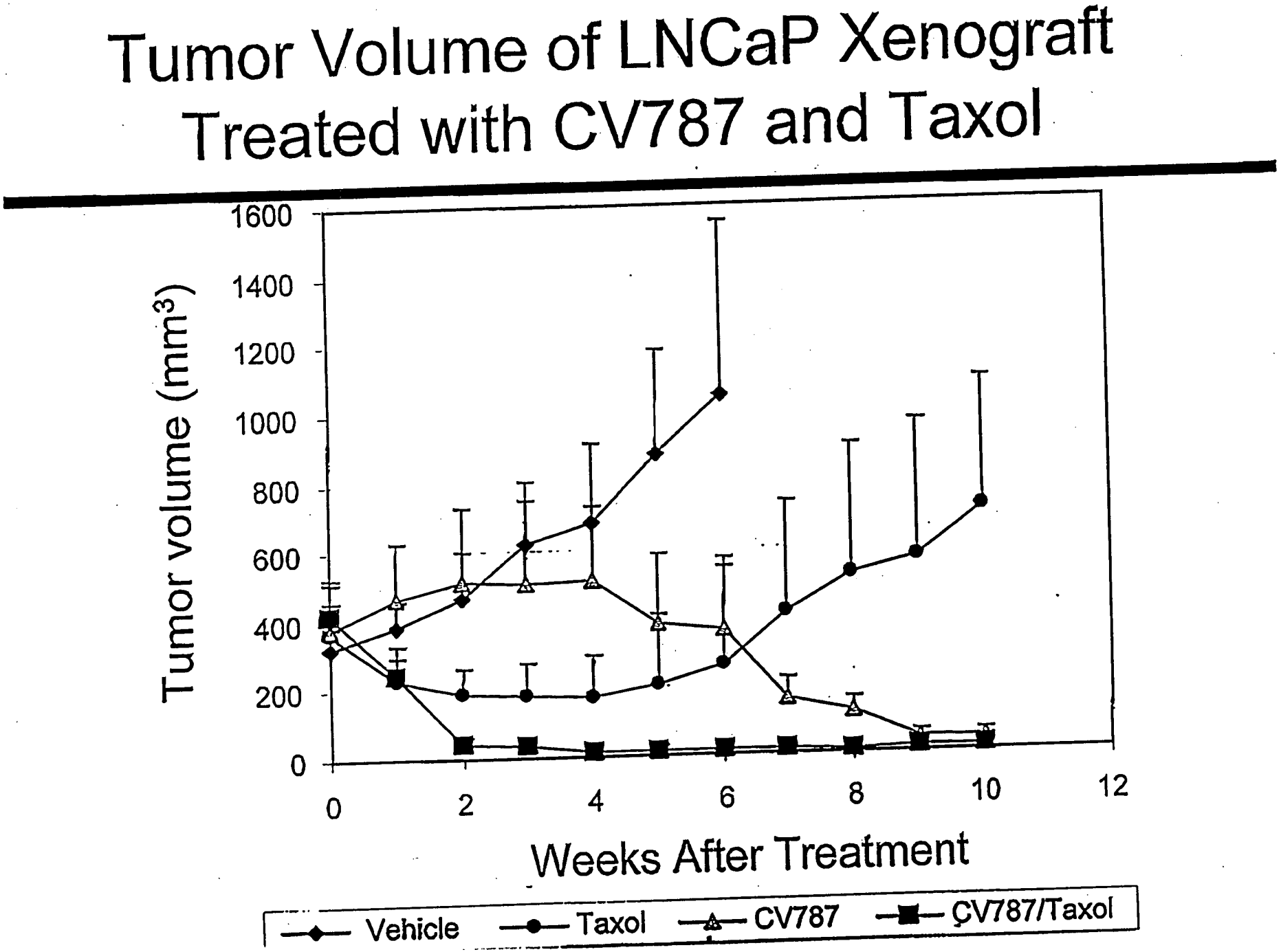
Tumor Volume of LNCaP Xenograft Treated with CV787 and Taxol
Tumor volume (mm3)
1600
1400
1200
1000
800
600
400
200
0
0
2
4
6
8
10
12
Weeks After Treatment
Vehicle
Taxol
CV787
CV787/Taxol

FIG. 26

Tumor Volume of LNCaP Xenograft Treated with CV787 and Mitoxantrone

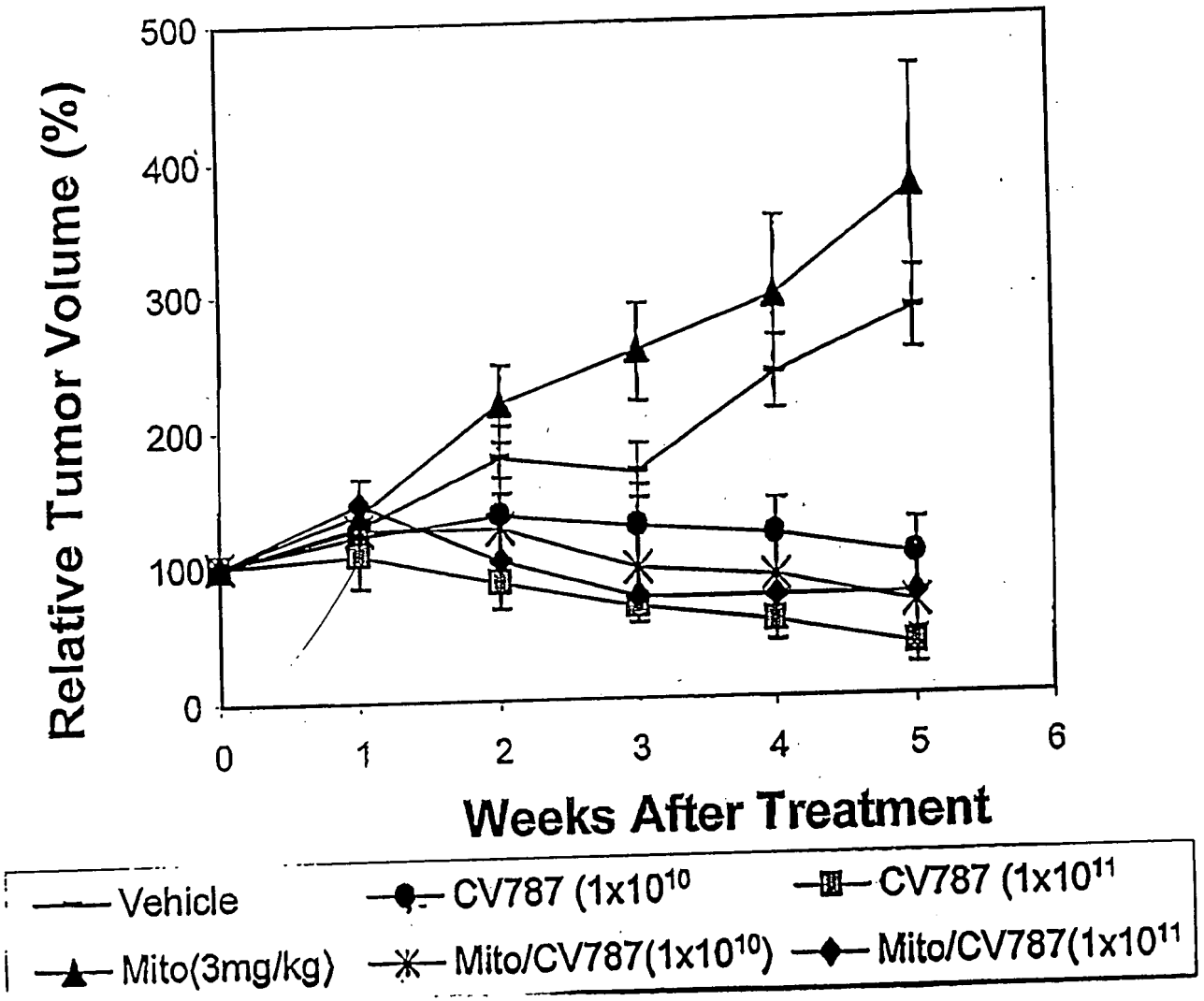

FIG. 27

Tumor Volume of LNCaP Xenografts Treated with CV787 and Estramustine

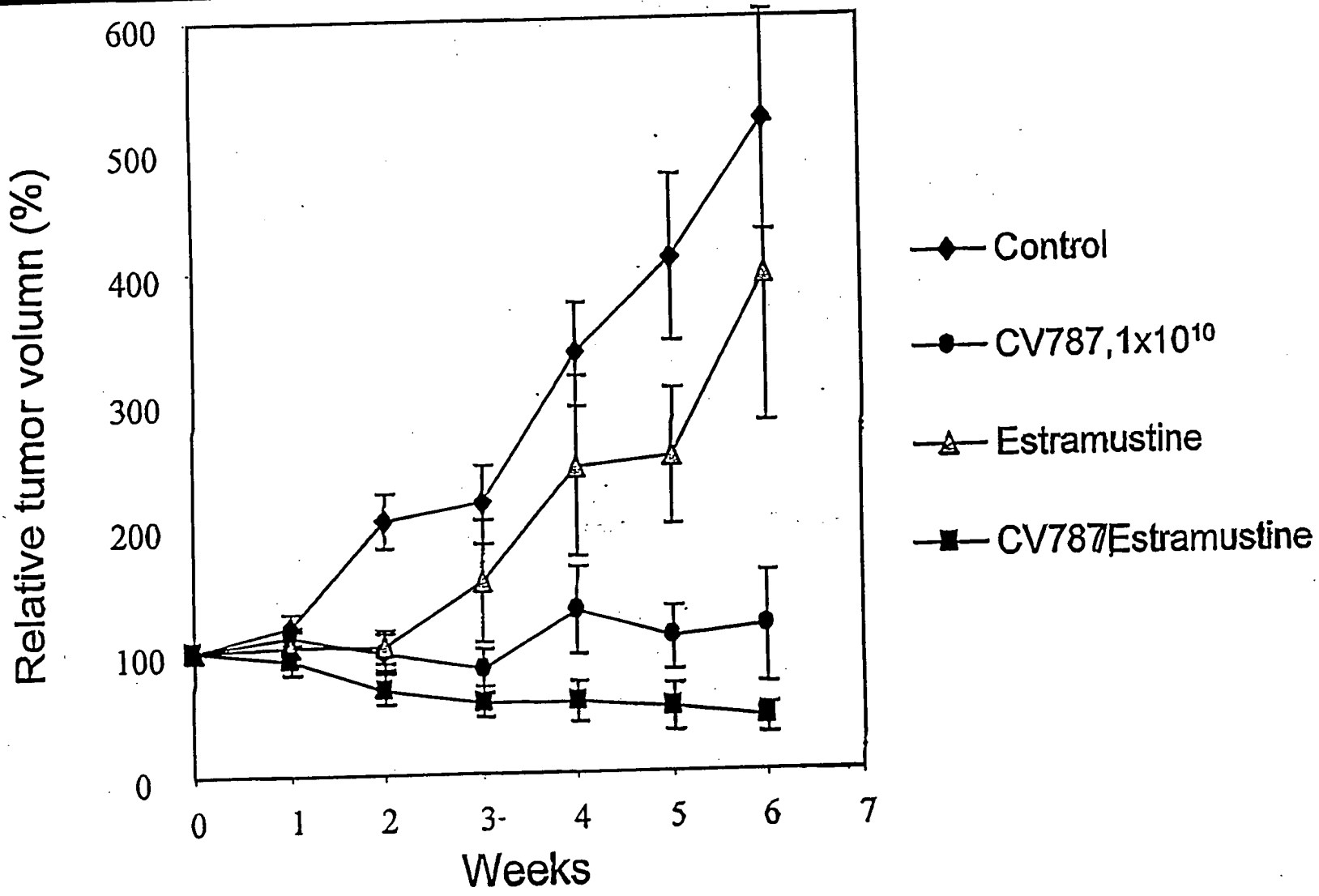

FIG. 28

LNCaP Xenograft Treated with CV787 and Docetaxel

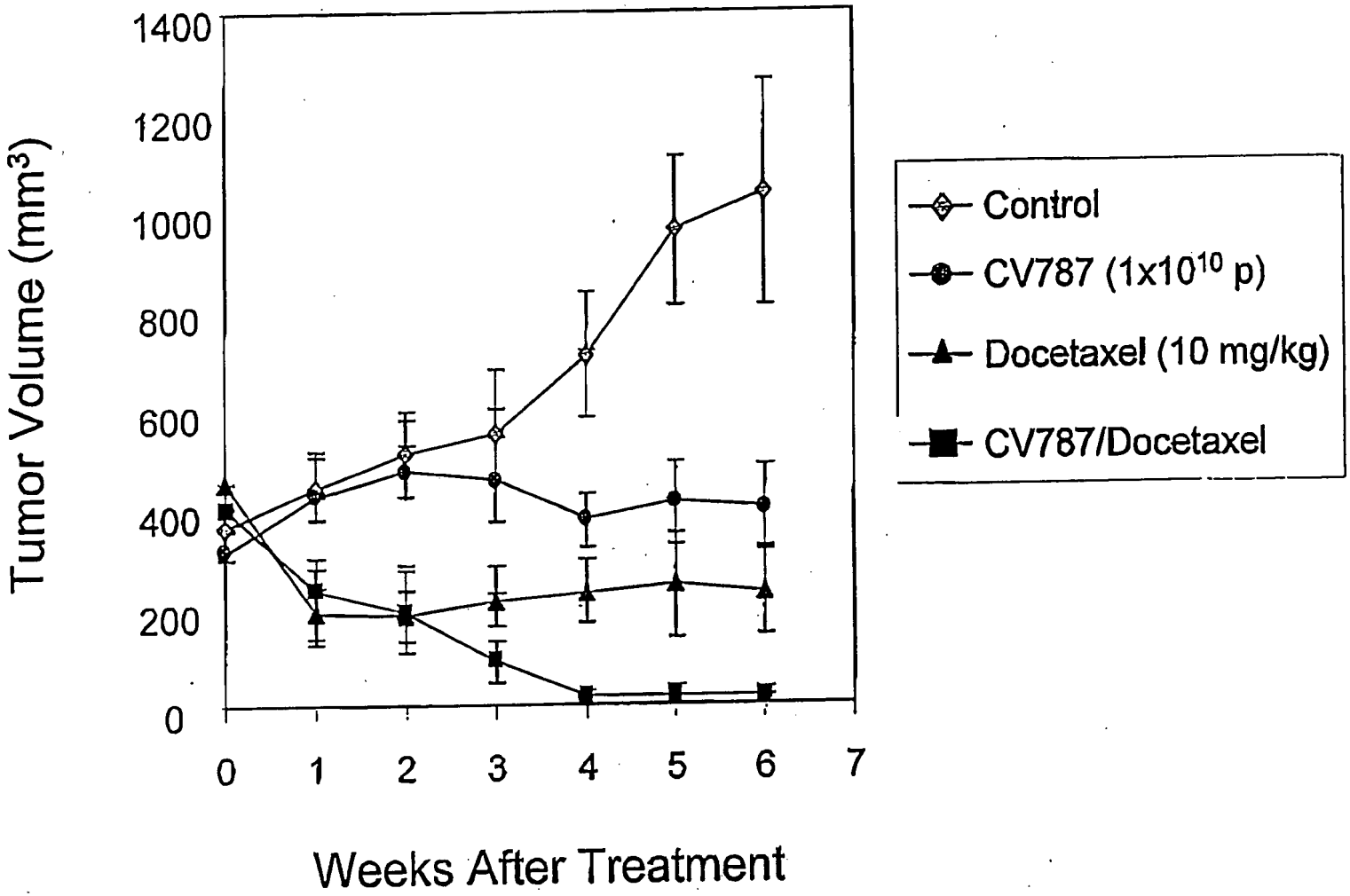

FIG. 29

LNCaP Xenograft Treated with CV787 and Docetaxel

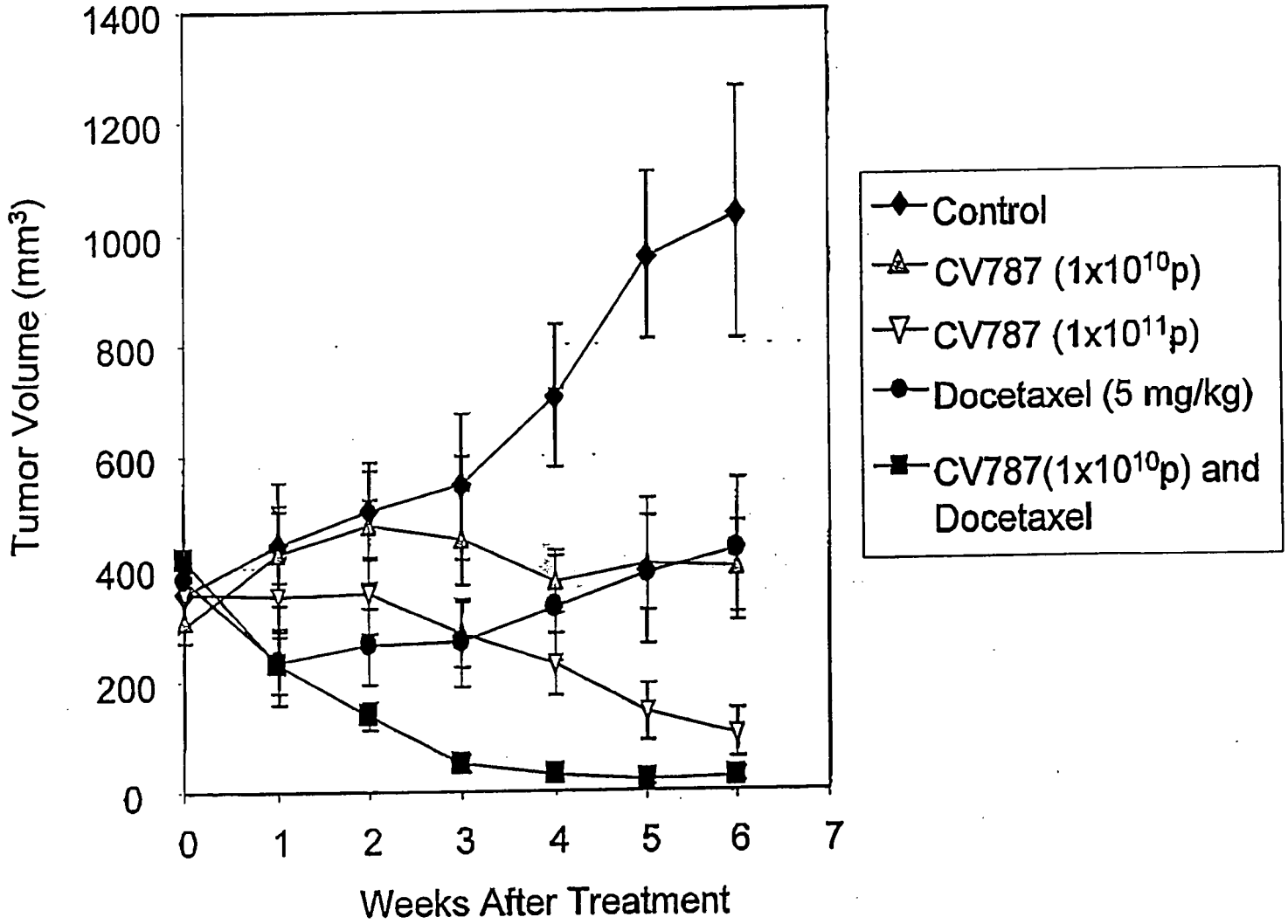

FIG. 30

Tumor Volume of Hep3B Treated with CV790 and Doxorubicin

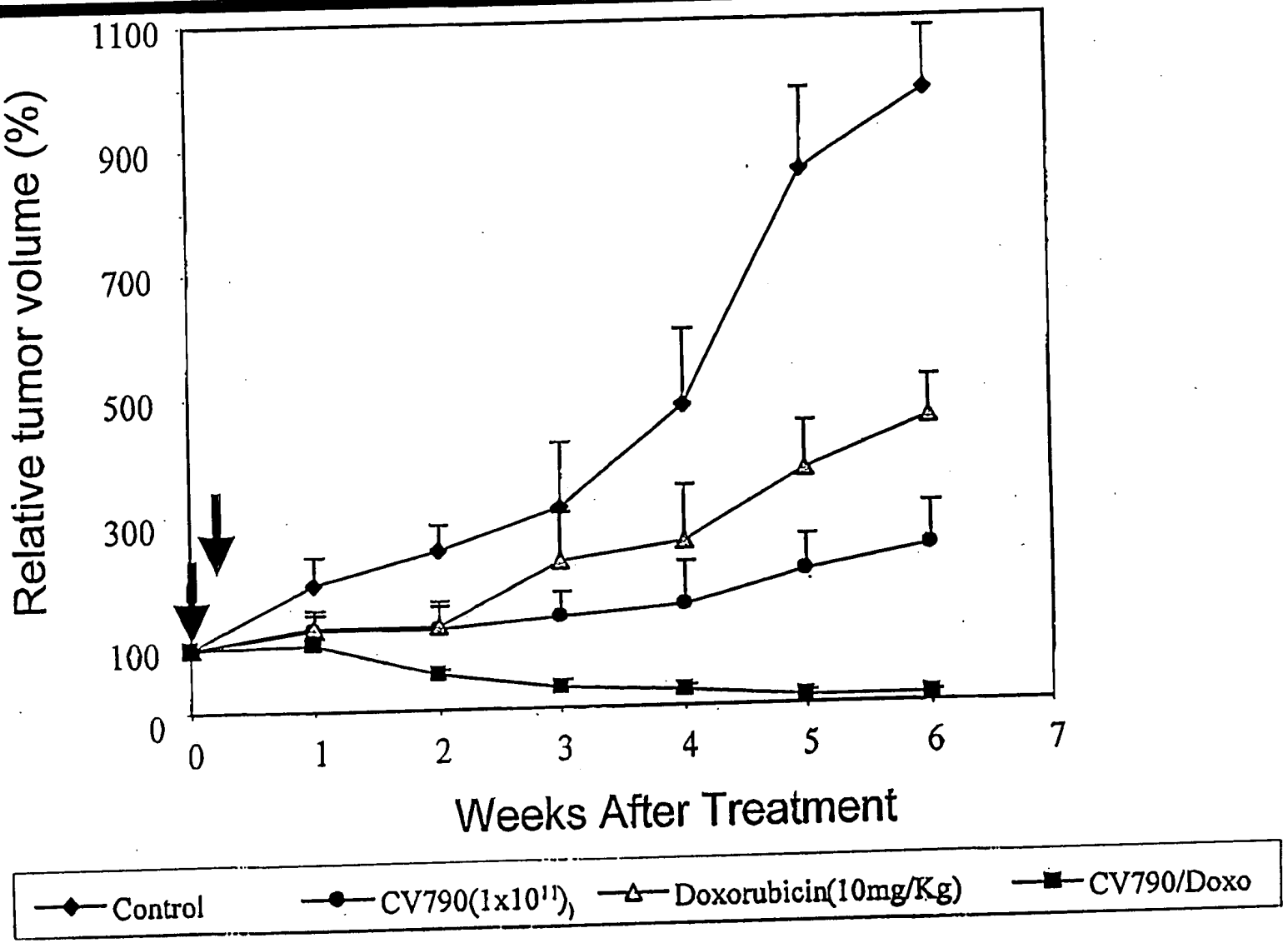

FIG. 31

Tumor Volume of Hep3B Xenograft Treated with CV890 and Doxorubicin

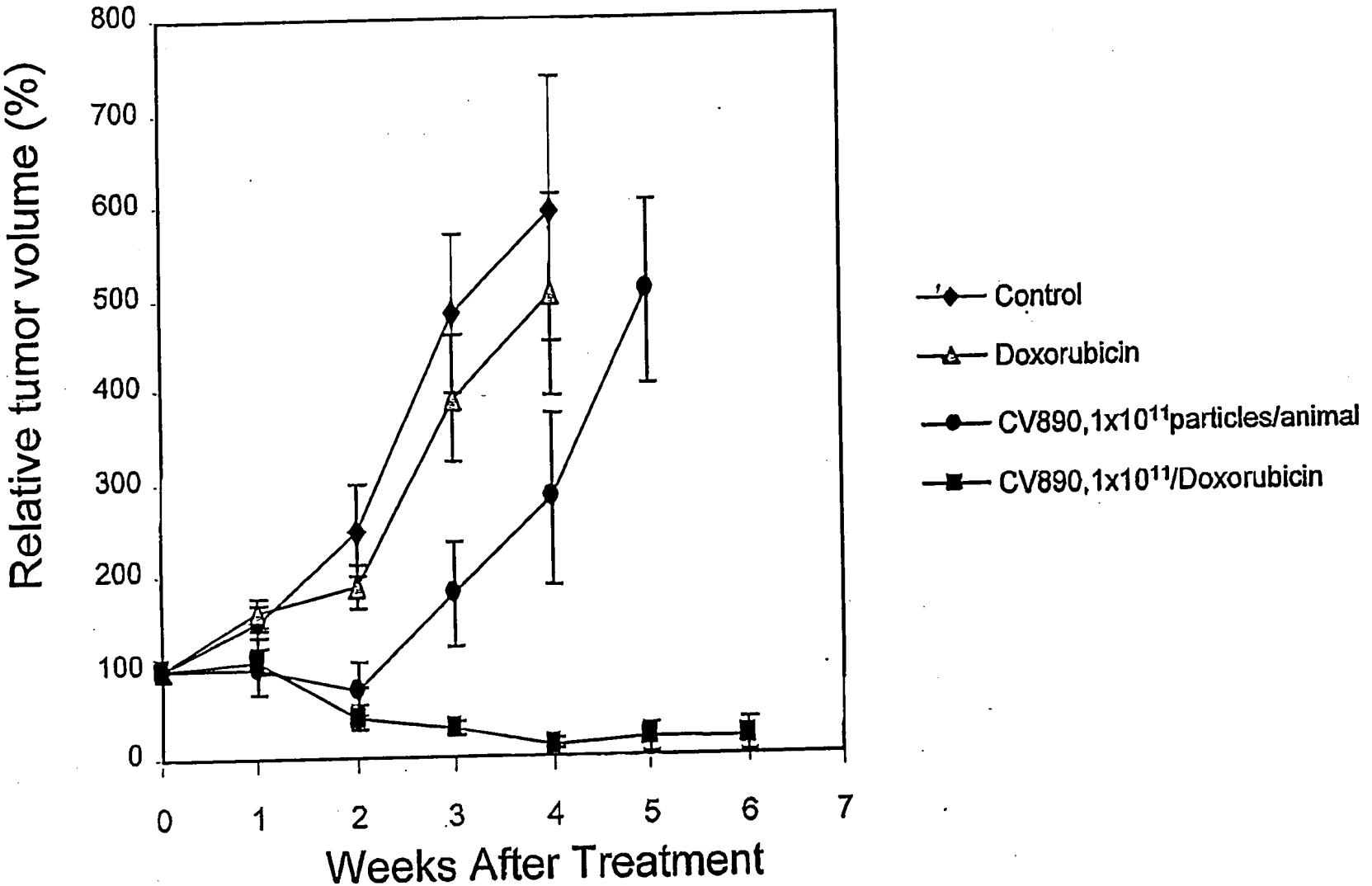

FIG. 32

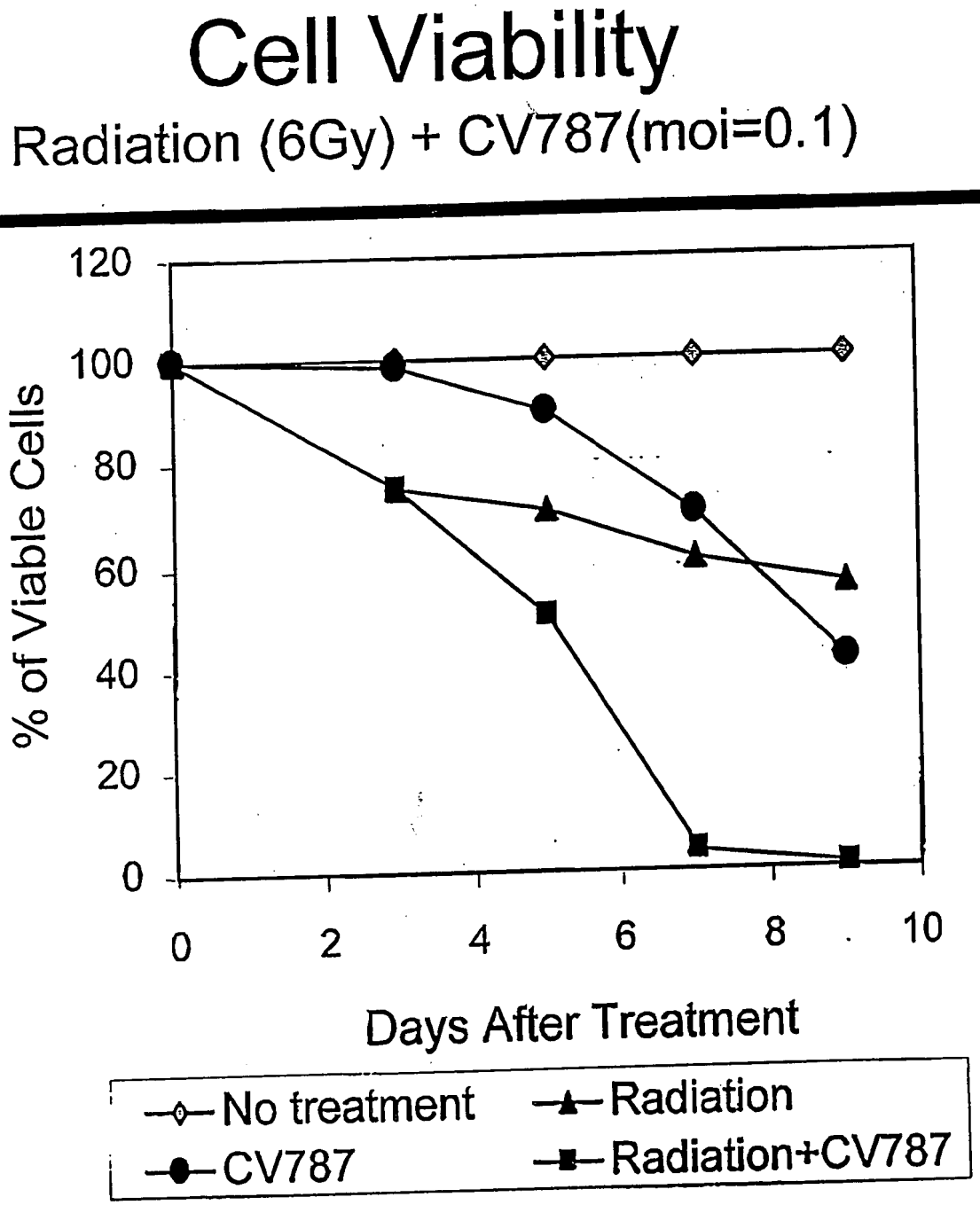
Cell Viability
Radiation (6Gy) + CV787(moi=0.1)
% of Viable Cells
120
100
80
60
40
20
0
0
2
4
6
8
10
Days After Treatment
No treatment
Radiation
CV787
Radiation+CV787

FIG. 33

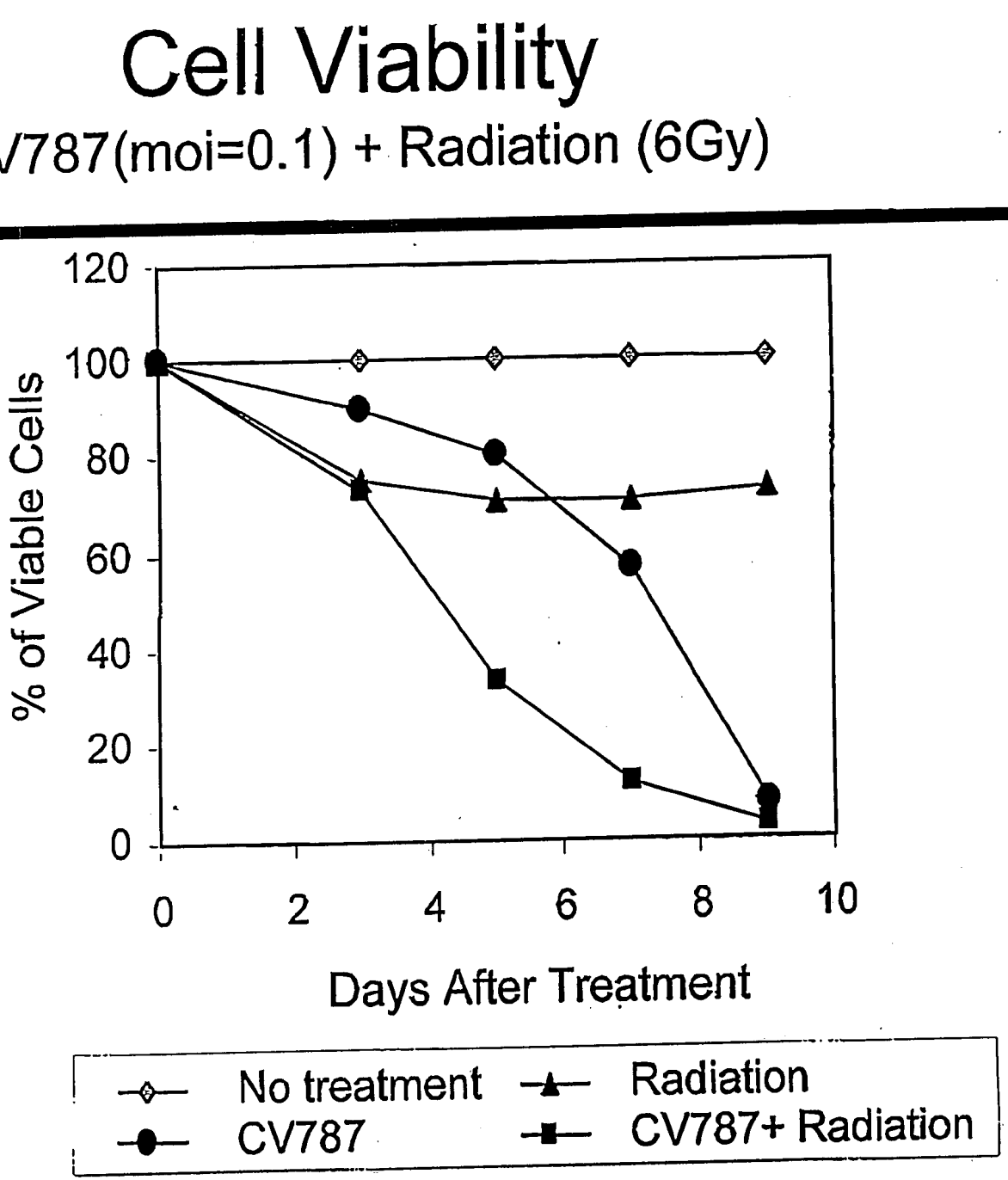
Cell Viability
CV787(moi=0.1) + Radiation (6Gy)
% of Viable Cells
120
100
80
60
40
20
0
0
2
4
6
8
10
Days After Treatment
No treatment
Radiation
CV787
CV787+ Radiation

FIG. 34

Virus Yield

CV787(moi=0.1) + Radiation (6Gy)

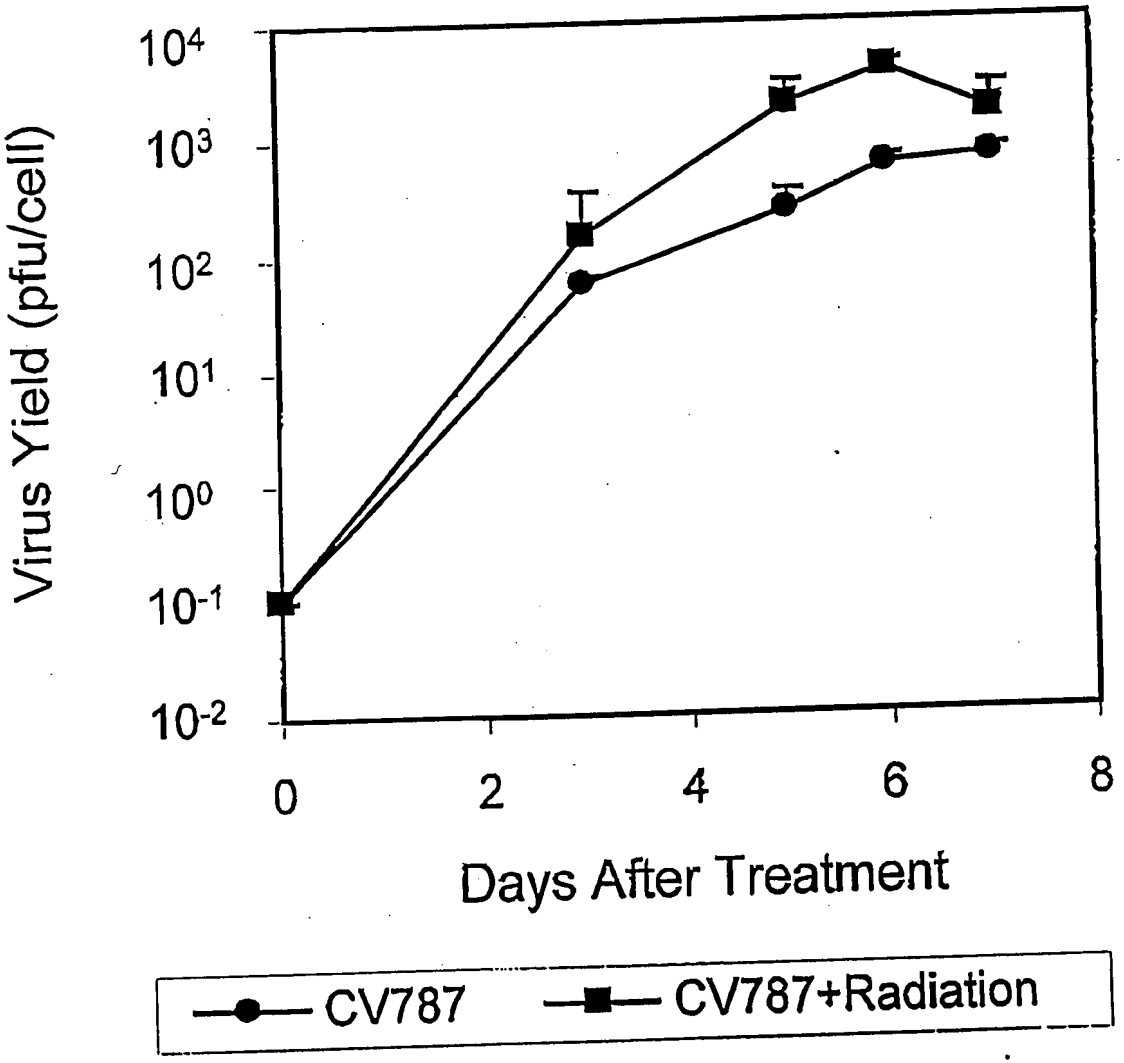

FIG. 35

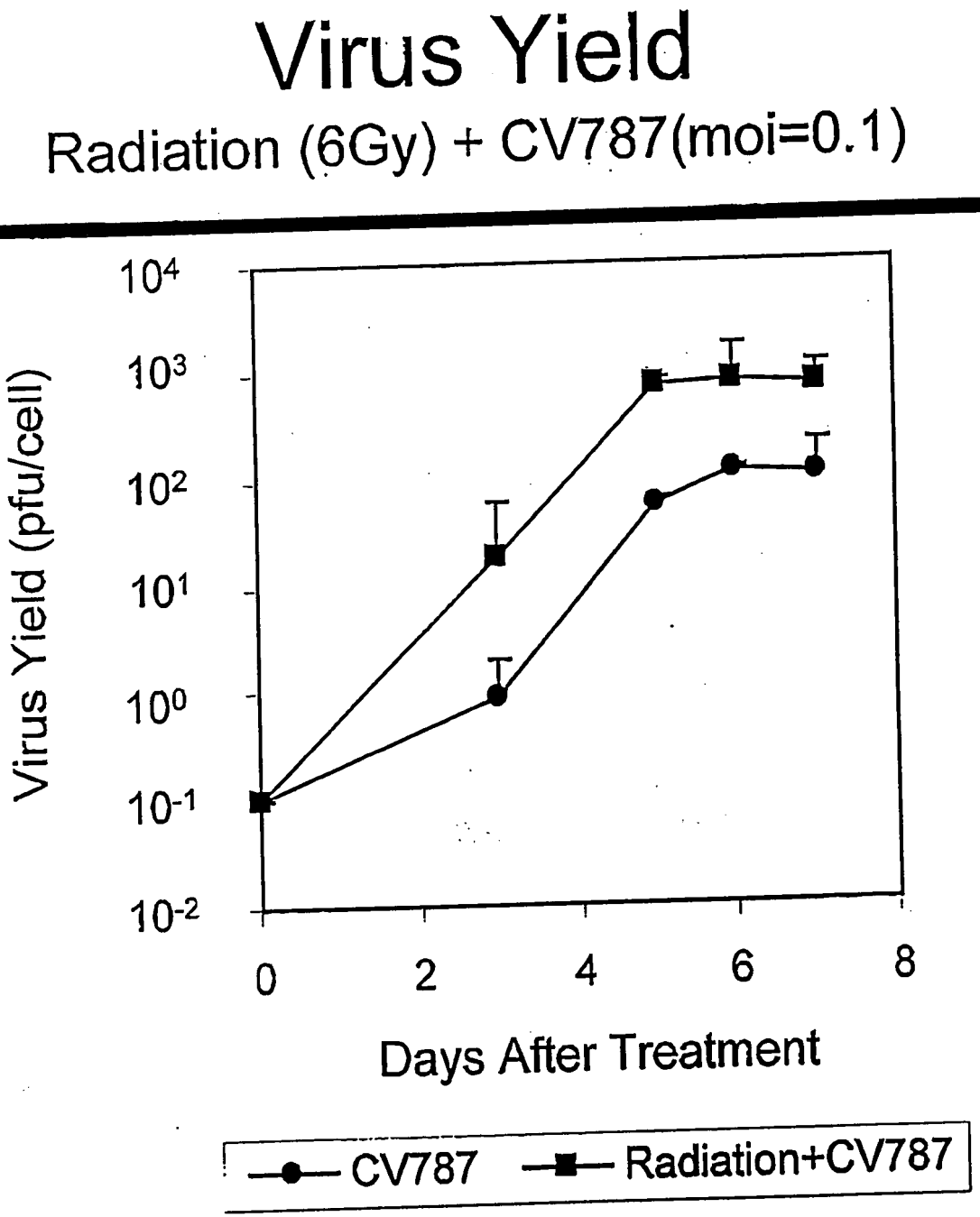
Virus Yield
Radiation (6Gy) + CV787(moi=0.1)
Virus Yield (pfu/cell)
10^4
10^3
10^2
10^1
10^0
10^-1
10^-2
0
2
4
6
8
Days After Treatment
CV787
Radiation+CV787

FIG. 36

Dose Response

LNCaP Treated with CV787 (0.01), then Radiation

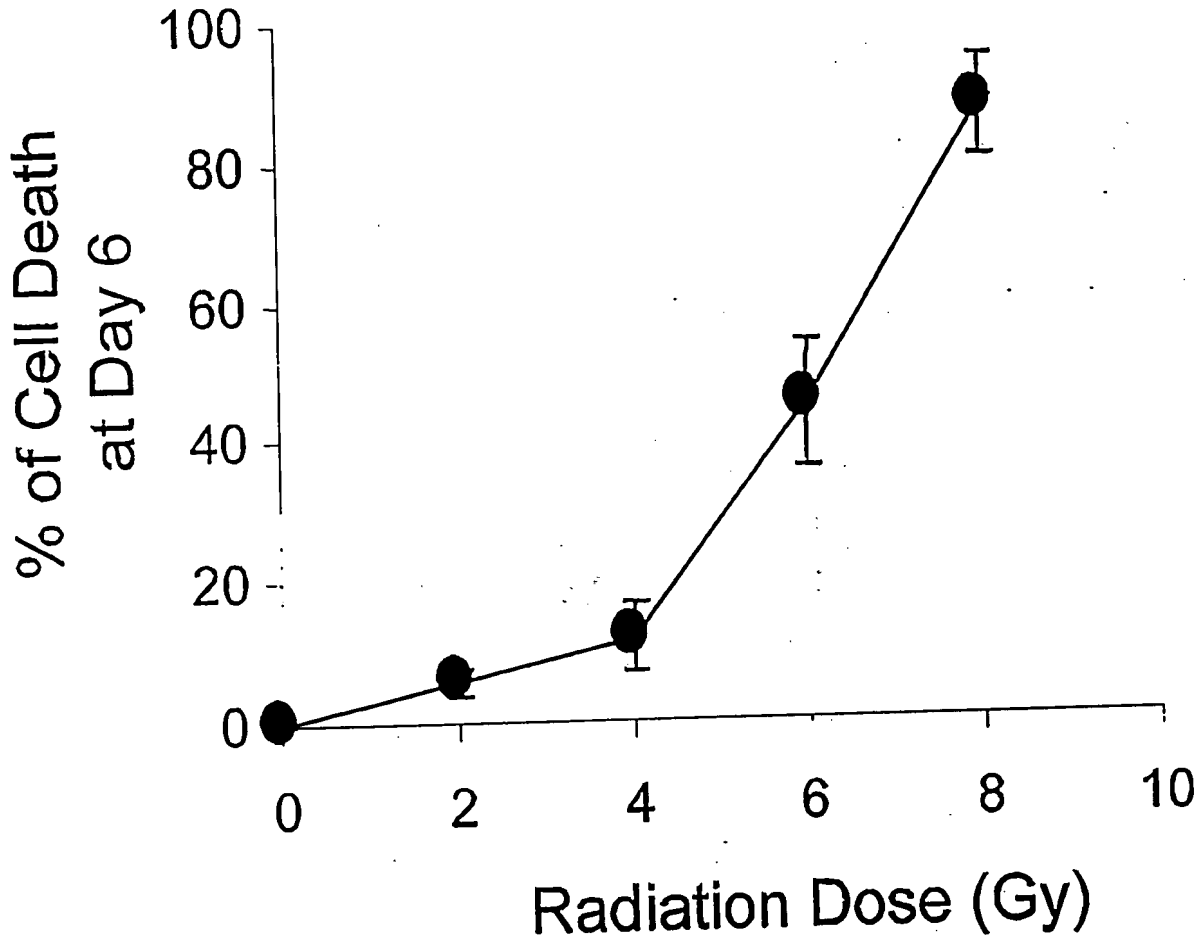

FIG. 37

```
G ATG ACC GGC TCA ACC ATC GCG CCC ACA ACG GAC TAT CGC AAC ACC
46
  Met Thr Gly Ser Thr Ile Ala Pro Thr Thr Asp Tyr Arg Asn Thr
    1               5                  10                  15

ACT GCT ACC GGA CTA ACA TCT GCC CTA AAT TTA CCC CAA GTT CAT GCC
94
Thr Ala Thr Gly Leu Thr Ser Ala Leu Asn Leu Pro Gln Val His Ala
                  20                  25                  30

TTT GTC AAT GAC TGG GCG AGC TTG GAC ATG TGG TGG TTT TCC ATA GCG
142
Phe Val Asn Asp Trp Ala Ser Leu Asp Met Trp Trp Phe Ser Ile Ala
              35                  40                  45

CTT ATG TTT GTT TGC CTT ATT ATT ATG TGG CTT ATT TGT TGC CTA AAG
190
Leu Met Phe Val Cys Leu Ile Ile Met Trp Leu Ile Cys Cys Leu Lys
         50                  55                  60

CGC AGA CGC GCC AGA CCC CCC ATC TAT AGG CCT ATC ATT GTG CTC AAC
238
Arg Arg Arg Ala Arg Pro Pro Ile Tyr Arg Pro Ile Ile Val Leu Asn
     65                  70                  75

CCA CAC AAT GAA AAA ATT CAT AGA TTG GAC GGT CTG AAA CCA TGT TCT
286
Pro His Asn Glu Lys Ile His Arg Leu Asp Gly Leu Lys Pro Cys Ser
 80                  85                  90                  95

CTT CTT TTA CAG TAT GAT TAA
307
Leu Leu Leu Gln Tyr Asp
                  100
```

FIG. 38

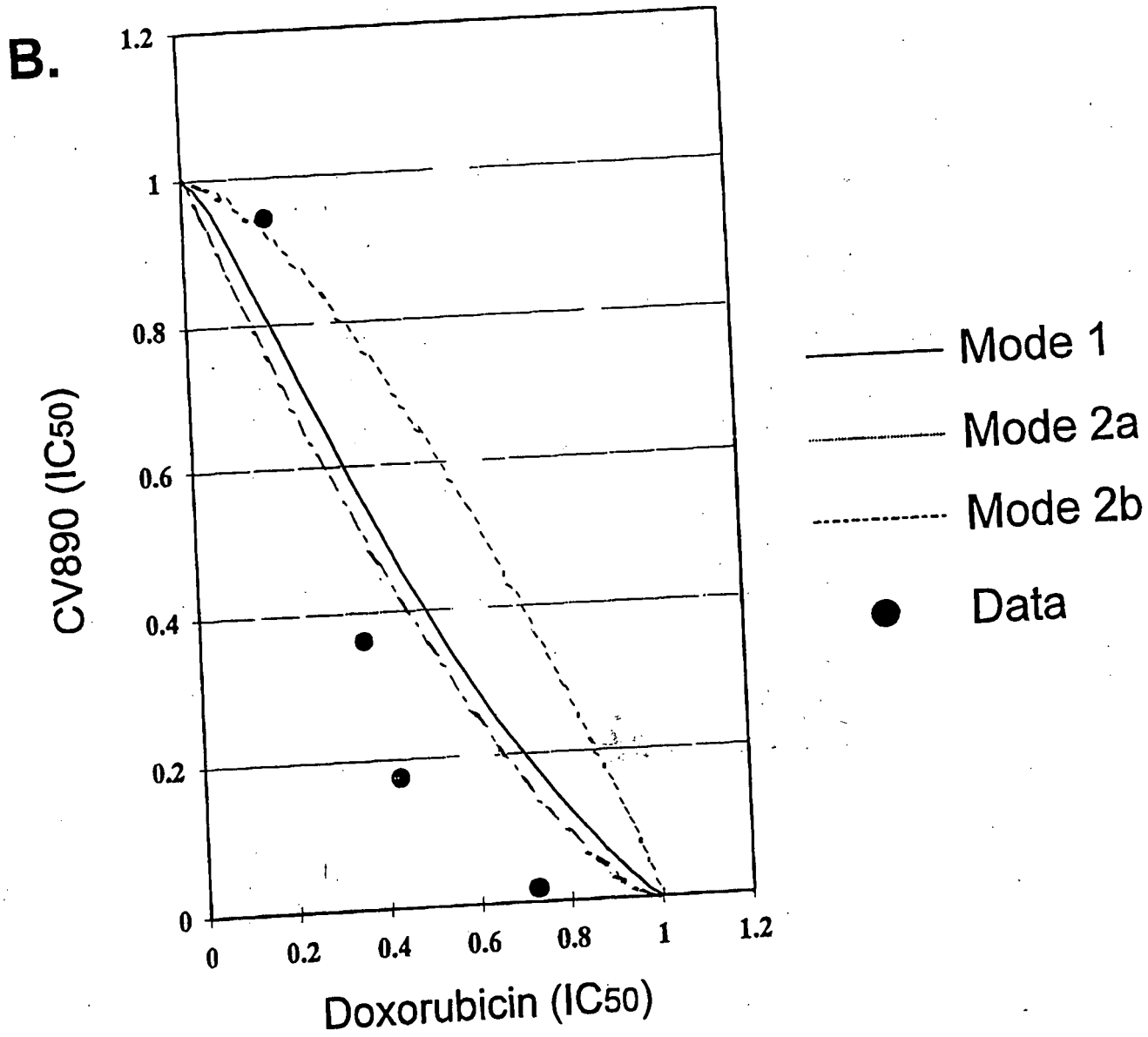
B.
1.2
1
0.8
0.6
0.4
0.2
0
CV890 (IC50)
0
0.2
0.4
0.6
0.8
1
1.2
Doxorubicin (IC50)
Mode 1
Mode 2a
Mode 2b
Data

FIG. 39

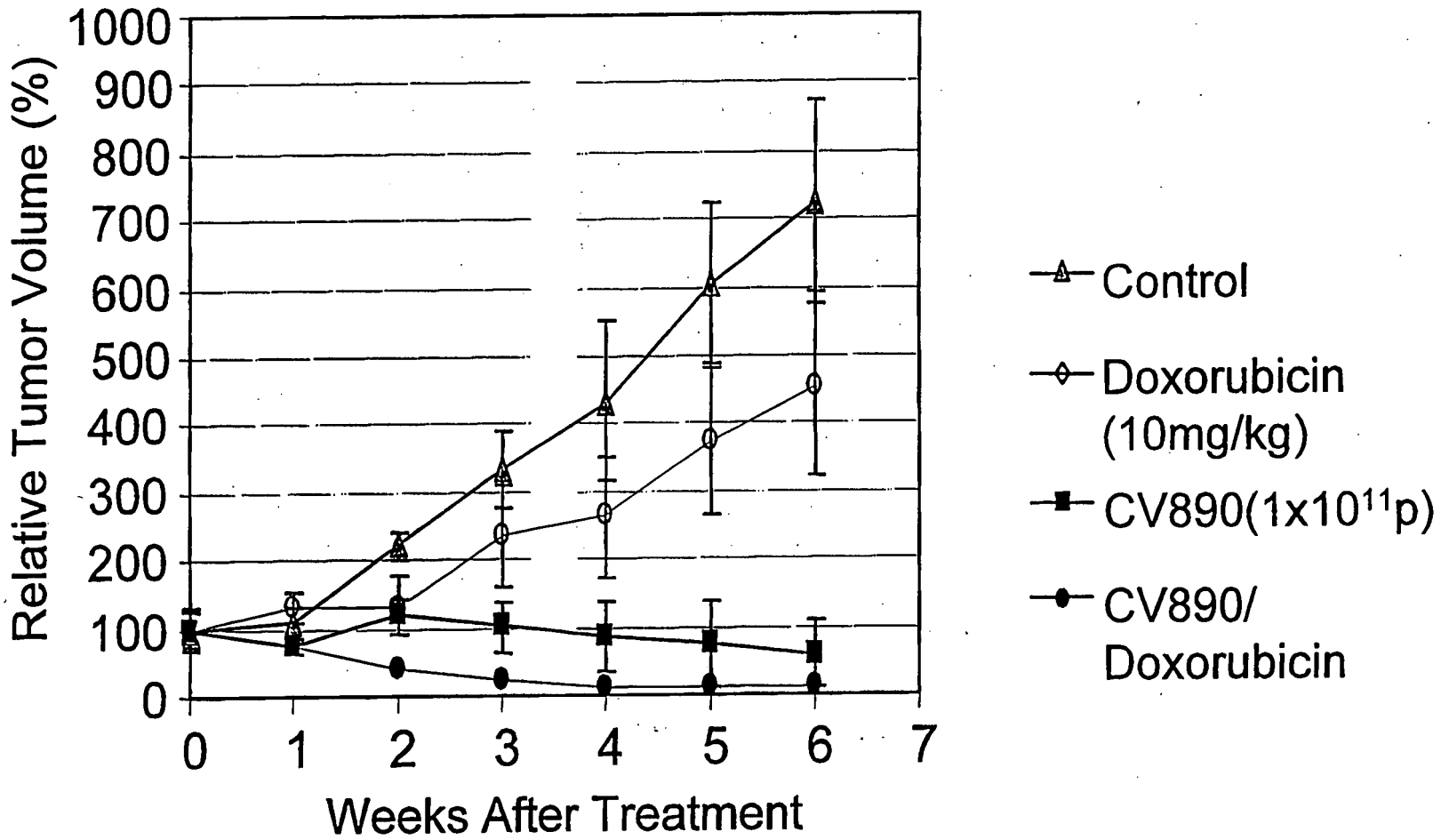
Relative Tumor Volume (%)
1000
900
800
700
600
500
400
300
200
100
0
0
1
2
3
4
5
6
7
Weeks After Treatment
Control
Doxorubicin (10mg/kg)
CV890(1x10^11p)
CV890/ Doxorubicin

FIG. 40

Virus Yield of CV884

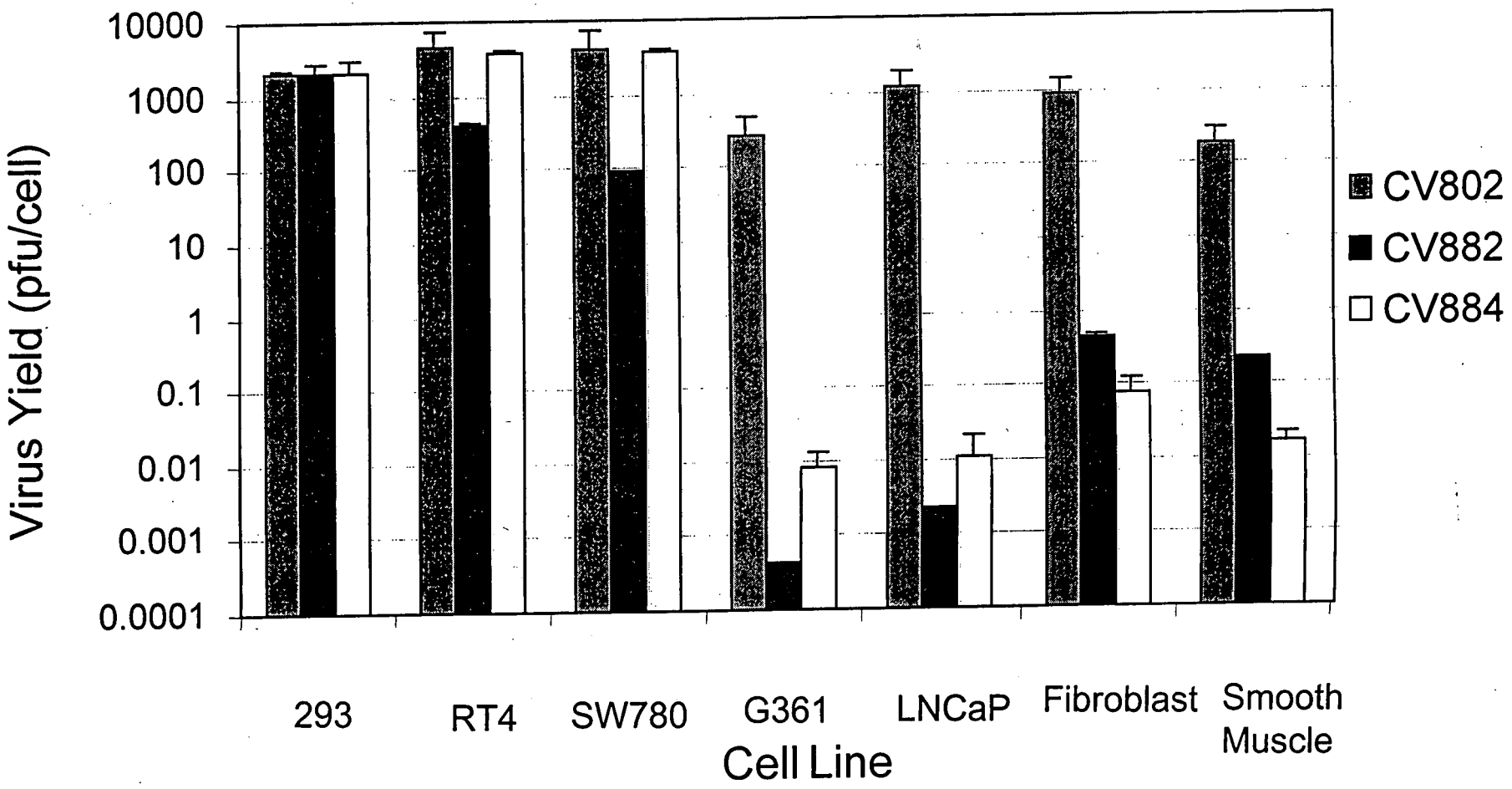

FIG. 41

Structure of CV876, CV882 and CV884